STATE OF MICHIGAN
CENTRAL PROCUREMENT SERVICES

Department of Technology, Management, and Budget

525 W. ALLEGAN ST., LANSING, MICHIGAN 48913
P.O. BOX 30026 LANSING, MICHIGAN 48909

CONTRACT CHANGE NOTICE

Change Notice Number **2**

to

Contract Number **200000000304**

	CONTRACTOR		STATE		
	KUNZ LEIGH & ASSOCIATES INC		Program Manager	Various	MDARD
	28081 Southfield Road				
	Lathrup Village, MI 48076-2816				
	Justin Shaulis		Contract Administrator	Jarrod Barron	DTMB
	517-803-3217			(517) 249-0406	
	j.shaulis@kunzleigh.com			barronj1@michigan.gov	
	CV0036059				

CONTRACT SUMMARY			
MDARD MAEAP VERIFICATION SYSTEM			
INITIAL EFFECTIVE DATE	**INITIAL EXPIRATION DATE**	**INITIAL AVAILABLE OPTIONS**	**EXPIRATION DATE BEFORE**
January 15, 2020	January 15, 2025	5 - 1 Year	January 15, 2025
PAYMENT TERMS		**DELIVERY TIMEFRAME**	

ALTERNATE PAYMENT OPTIONS			EXTENDED PURCHASING	
☐ P-Card	☐ PRC	☐ Other	☐ Yes	☒ No

MINIMUM DELIVERY REQUIREMENTS

DESCRIPTION OF CHANGE NOTICE				
OPTION	**LENGTH OF OPTION**	**EXTENSION**	**LENGTH OF EXTENSION**	**REVISED EXP. DATE**
☐		☐		January 15, 2025
CURRENT VALUE	**VALUE OF CHANGE NOTICE**	**ESTIMATED AGGREGATE CONTRACT VALUE**		
$1,869,920.00	$744,695.79	$2,614,615.79		

DESCRIPTION
Effective 7/13/2021, the parties add $744,695.79 for the MAEAP Verification System enhancements detailed in the attached statement of work. All other terms, conditions, specification and pricing remain the same. Per Contractor, Agency, DTMB Procurement and State Administrative Board approval on 7/13/2021.

Program Managers
for
Multi-Agency and Statewide Contracts

AGENCY	NAME	PHONE	EMAIL
DTMB	Laura Brancheau	517-335-1334	brancheaul@michigan.gov
MDARD	Joseph Kelpinski	586-206-2862	kelpinskij@michigan.gov

MICHIGAN DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
IT SERVICES
STATEMENT OF WORK FOR IT CHANGE NOTICES

Project Title: MAEAP Verification System - Enhancements	**Period of Coverage:**
Requesting Department: MDARD	**Date:** 04/30/2021
Agency Project Manager: Jason Lantz	**Phone:** 517-917-0374
DTMB Project Manager: David Tripp	**Phone:** 810-339-1105

Brief Description of Services to be provided:

PROJECT OBJECTIVE:
The purpose of this project is to enhance the current MAEAP Verification System to address additional requirements identified during the initial implementation.

SCOPE OF WORK:
KL&A is adding functionality to current MAEAP Verification System to address key gaps and improvements identified during development of the initial launch of the system. Please see Appendix A for the specific set of requirements being incorporated.

TASKS:
Technical support is required to assist with the following tasks:

DELIVERABLES:
Deliverables will not be considered complete until the Agency Project Manager has formally accepted them. Deliverables for this project include:
- Sprints 1-12
- Release UAT Completion
- Updated Training Materials
- Release to Production/Go-Live

All SUITE documentation will be updated to include appropriate references and information pertaining to the MAEAP Verification System enhancements. These documents will include:
- PMM-0101 Project Charter
- PMM-0102 Project Management Plan
- SEM-0301 Maintenance Plan
- SEM-0302 Software Configuration Management Plan
- SEM-0401 Requirements Traceability Matrix
- SEM-0402 Requirements Specifications
- SEM-0501 Functional Design Document
- SEM-0603 Detailed Test Plan
- SEM-0604 System Design Document
- SEM-0606 Test Case Document
- SEM-0701 Transition Plan
- SEM-0702 Installation Plan
- SEM-0703 Training Plan

ACCEPTANCE CRITERIA:
DTMB and MDARD Project Managers will approve all completed deliverables.
PROJECT CONTROL AND REPORTS:

A bi-weekly progress report must be submitted to the Agency and DTMB Project Managers throughout the life of this project. This report may be submitted with the billing invoice. Each bi-weekly progress report must contain the following:

1. **Hours**: Indicate the number of hours expended during the past two weeks, and the cumulative total to date for the project. Also state whether the remaining hours are sufficient to complete the project.
2. **Accomplishments**: Indicate what was worked on and what was completed during the current reporting period.
3. **Funds**: Indicate the amount of funds expended during the current reporting period, and the cumulative total to date for the project.

SPECIFIC DEPARTMENT STANDARDS:
Agency standards, if any, in addition to DTMB standards.

PAYMENT SCHEDULE:
Payment will be made on a satisfactory acceptance of each Milestone basis. DTMB will pay CONTRACTOR upon receipt of properly completed invoice(s) which shall be submitted to the billing address on the State issued purchase order not more often than monthly. DTMB Accounts Payable area will coordinate obtaining Agency and DTMB Project Manager approvals. All invoices should reflect actual work completed by payment date, and must be approved by the Agency and DTMB Project Manager prior to payment. The invoices shall describe and document to the State's satisfaction a description of the work performed, the progress of the project, and fees. When expenses are invoiced, receipts will need to be provided along with a detailed breakdown of each type of expense. Payment shall be considered timely if made by DTMB within forty-five (45) days after receipt of properly completed invoices.

EXPENSES:
The State will NOT pay for any travel expenses, including hotel, mileage, meals, parking, etc.

PROJECT CONTACTS:
The designated Agency Project Manager is:

Joe Kelpinkski
MAEAP Manager
MDARD
Atrium, Conn Hall
525 W. Allegan St.
Lansing, MI 48933
KelpinskiJ@michigan.gov

The designated DTMB Project Manager is:

Dane Sjoquist
DTMB Agency Services Manager
DTMB
Atrium, Conn Hall
525 W. Allegan St.
Lansing, MI 48933
517-284-9773
SjoquistD@michigan.gov

AGENCY RESPONSIBILITIES:
MDARD Product Owner, Project Manager, and Subject Matter Experts (SMEs) will be required to assist with the following project activities:

- Attend discovery and JAD sessions
- Attend Sprint Planning and Demonstration events
- Participate in all Sprint and Release User Acceptance Testing
- Provide subject matter expertise as needed
- Review and approve deliverables and SUITE documentation

DTMB RESPONSIBILITIES:
DTMB will continue providing technical support and test coorindator responsibilities, including:

- Writing test cases, plans, and reports
- Executing test cases
- Supporting agency testers
- Standard BA and PM support

LOCATION OF WHERE THE WORK IS TO BE PERFORMED:
Consultants will work remotely, but as COVID protocols allow, may also work at combination of SOM offices, primarily Constitution Hall in Lansing, MI, and KL&A offices in Okemos, MI.

EXPECTED CONTRACTOR WORK HOURS AND CONDITIONS:

Work hours are not to exceed eight (8) hours a day, forty (40) hours a week. Normal working hours of 8:00 am to 5:00 pm are to be observed unless otherwise agreed to in writing. No overtime will be permitted.

PROJECT PLAN and PAYMENT SCHEDULE:

Event	Start	Finish	Invoice Date	Cost
Sprint 1	06/18/21	07/01/21	07/01/21	$41,371.99
Sprint 2	07/02/21	07/16/21	08/01/21	$41,371.99
Sprint 3	07/19/21	07/30/21	08/01/21	$41,371.99
Sprint 4	08/02/21	08/13/21	09/01/21	$41,371.99
Sprint 5	08/16/21	08/27/21	09/01/21	$41,371.99
Sprint 6	08/30/21	09/13/21	10/01/21	$41,371.99
Sprint 7	09/14/21	09/27/21	10/01/21	$41,371.99
Release 2.0 UAT	10/04/21	10/25/21	-	-
Release 2.0 Go/No-Go	10/25/21	10/25/21	-	-
Release 2.0 Go-Live	11/09/21	11/09/21	12/01/21	$82,743.97
Sprint 8	09/28/21	10/11/21	11/01/21	$41,371.99
Sprint 9	10/12/21	10/25/21	11/01/21	$41,371.99
Release 2.1 UAT	10/26/21	11/16/21	-	-
Release 2.1 Go/No-Go	11/16/21	11/16/21	-	-
Release 2.1 Go-Live	12/02/21	12/02/21	01/01/22	$82,743.97
Sprint 10	10/26/21	11/08/21	12/01/21	$41,371.99
Sprint 11	11/09/21	11/23/21	12/01/21	$41,371.99
Sprint 12	11/24/21	12/09/21	01/01/22	$41,371.99
Release 2.2 UAT	12/10/21	01/04/22	-	-
Release 2.2 Go/No-Go	01/04/22	01/04/22	-	-
Release 2.2 Go-Live	01/19/22	01/19/21	02/01/22	$82,743.97
Warranty	01/20/22	04/19/22	-	-
			TOTAL	**$744,695.79**

1.   Overview

These requested changes are to add audit history, consolidated assessments, workflow, and verification detail enhancements to the base MAEAP Verification System platform.

The specifics of each enhancement are listed in section 2, along with the corresponding requirements captured and approved by MDARD staff. The column definitions for the new requirements are defined below.

New Requirements:

Column	Description
SOW ID	The ID used within the initial requirements gathering sessions.
Title	A short title that summarizes the requirement
Requirement	A short description of the necessary business, functional, or technical requirement
Functional Area	A list of the functional area(s) that the listed requirement maps to. Relates directly to the cost section of the Change Notice.
Work Type	This column defines the level of effort required by KL&A to incorporate the requested functionality. The values are defined below: • Configuration: This requires no to very light code changes, and is mostly configuration of back end modules • Existing: This is existing functionality that can reused exactly as is, or with minimal configuration • Extend Functionality: This is existing functionality that exists within the current system, but requires customization or configuration to handle requested functionality • Migration: These are efforts related to data migration efforts from the legacy system(s) • New Development: This is new functionality that does not exist within the current system • Training: These refer to the training efforts for this implementation
Implementation Comments	Any additional comments or text about the implementation of this requirement

2.   New Enhancements

SOW ID	Requirement Title	Requirement Description	Functional Area	Work Type	Implementation Comments
1	Create user friendly, readable, action history logs	The system must include action history logs in a friendly, readable format for each of the following areas: 1. Farms 2. Activities 3. Contacts 4. Toolbar objects (notes, tasks, files, etc.) 5. Producer Education 6. Technician Training 7. Reporting Management 8. Assessment Management 9. Farm Inventory Management	Audit History	New Development	

SOW ID	Requirement Title	Requirement Description	Functional Area	Work Type	Implementation Comments
		10. Conservation District Management 11. Saved Search Management 12. Lookup Type/Code Management 13. Sign Management 14. Template Management 15. User Profile 16. Security Action logs will be tied to events in the system that trigger a change related to each respective area. For example, farm create, edit, delete, and status changes will all generate action history logs.			
2	Display action history feed	The system must display an action history feed on objects of the system that contain action history logs so that an admin or approved user may view the most recent action history logs.	Audit History	New Development	
3	Add hyperlinks to action history logs for easy navigation	The system must include hyperlinks in action history logs that will navigate the user to relevant system objects included in the log. For example, a farm action history log must include the name of the farm that the action was generated on as a hyperlink. If the user clicks the hyperlink, it will navigate the user to that farm.	Audit History	New Development	
4	Link action logs with relevant audit history records	The system must include a link between action history logs and the relevant audit history records. For example, a user viewing an action history log must be able to click a link or button to view the related audit history records.	Audit History	New Development	
5	Create action history search page	The system must include an action history search page with which a user may search all action history logs in the system by the following criteria: 1. Time range the log was generated 2. The user that created the log 3. The type of the log	Audit History	New Development	
6	Reduce audit history noise	The system must prevent unnecessary audit history records from being generated in the following cases: 1. Audit records where no changes occurred 2. Audit records related to write only database tables 3. Audit records related to system operations that have no relevance to MAEAP data management (i.e. user preferences)	Audit History	Extend Functionality	
7	Add audit history view on farms, contacts, and education	The system must include an audit history view for farms, contacts, and education that allows the user to view a list of audit history records that apply only to that entity.	Audit History	New Development	
8	Audit history search	The system must include audit history search features on the following criteria: 1. User who created the record 2. Date/Time range records were created 3. The entity the record is related to (ie. farm, contact)	Audit History	New Development	

SOW ID	Requirement Title	Requirement Description	Functional Area	Work Type	Implementation Comments
		4. The database table 5. The type of record (i.e. create, update, delete)			
9	Display audit history as timeline feed	The system must display the audit history records as a timeline feed that allows the user to consume a series of related changes over time.	Audit History	New Development	
10	Support multiple verification requirements on a single risk question	The system must support multiple system verification requirements on risk questions.	Consolidated Assessments	New Development	
11	Display multiple system verification requirements on a single risk question	The system must display multiple system verification requirements on risk questions wherever a risk question can be viewed. This includes: 1. Risk question management 2. Assessment management 3. Farm assessment activity	Consolidated Assessments	New Development	
12	Manage risk questions within sections detail	The system must allow assessment sections to be managed independently, including the maintenance of included risk questions, sub-sections and their display order.	Consolidated Assessments	New Development	
13	Support multiple systems in a single action plan	The system must include activity action plans that support the creation and maintenance of multi-system action plans.	Consolidated Assessments	New Development	
14	Move Farm Inventory Management to the Farm Details	The system must include a farm inventory management page on the farm details as a replacement for the farm inventory activity. On this page, Technicians must be able to maintain an ongoing set of farm inventory data.	Farm Inventory	New Development	
15	Update Farm Inventory Interface for Easy Management	The system must include an updated farm inventory management page with improved UI for maintaining farm inventory data. For example, rather than having a large page that displays all crop inventory options, only the crops that the farm currently has should be displayed.	Farm Inventory	New Development	
16	Display Farm Inventory Verified Values	The system must display a farm's verified inventory on the farm inventory page so it is easy for a user to understand the context of verified inventory vs total inventory.	Farm Inventory	New Development	
17	Record Snapshot of Farm Inventory Within Verification Details	The system must include a snapshot of the farm inventory data within the verification details. This will replace the "verified farm inventory" activity currently in use.	Farm Inventory	New Development	
18	Create an End-to-End Assessment to Verification Workflow	The system must include a defined workflow that guides users through the verification process. This process must include: 1. Assessment 2. Action plan 3. Processing verification requests 4. Approving verification requests 5. Processing verification results 6. Processing verification artifacts (i.e. logo use, verification documentation)	Verification Workflow	New Development	

SOW ID	Requirement Title	Requirement Description	Functional Area	Work Type	Implementation Comments
19	Create Workflow UI that Displays the Current Workflow Step and Conditions	The system must include workflow UI that makes it clearly apparent to the user what step the verification workflow is in and what the user must do to meet the conditions of the step before advancing to the next one.	Verification Workflow	New Development	
20	Update Assessment and Verification Activities to Support End-to-End Workflow	The system must include updated activities to support the implemented end-to-end verification workflow. This includes: 1. Updated overview page cards (i.e. activity overview) 2. Consolidating multiple activities into a single activity where necessary.	Verification Workflow	New Development	
21	Enhance Verification Details	The system must include a verification detail page that contains a snapshot in time of the fields contained within the System Information form for that verification.	Verification Details	New Development	
22	Verification Search Page	The system must include a search page with which an admin can search for verification records across all farms on the following criteria: 1. Verification reference number 2. Farm 3. System 4. Greenhouse 5. Technician 6. Verifier	Verification Details	New Development	
23	Migrate Legacy Verification Details	Legacy verifications in the current system must be migrated to support the new verification detail format and function.	Verification Details	Migration	

3.   Schedule

KL&A plans to follow the same overall approach as used on the initial MAEAP Verification System implementation: A Sprint Zero period followed by construction and testing sprints, with a final Release UAT period immediately preceding deployment to the SOM production environment.

3.1   Enhancements Timeline

The overall timeline for the MAEAP Verification System enhancements willl be approximately 6 months, followed by 90 days of warranty. Major milestones and task durations are as follows:

Construction: 12 sprints, 10-business days each
Release UAT: 15 business days
DTMB Release Prep: 10 business days
MAEAP Verification System Enhancements Warranty: 90 calendar days

4.   Warranty

Only functionality specific to the MAEAP Verification System enhancements developed, tested, and released as part of this change notice will be covered by a warranty period of 90 calendar days, post go-live pursuant to "Warranty Period" as defined in custom software development definitions within contract no. 200000000304. Additionally, there is no maintenance and support coverage under this change notice after the included 90 calendar day warranty expires. Maintenance and support will be covered for the full MAEAP Verification System under a separate and distinct Statement of Work.

5.   Cost

KL&A's expectation is that MDARD will leverage existing MAEAP functionality as-is wherever possible and this quote includes this expectation in our pricing model. Further customizations beyond existing functionality not called out in this statement of work will result in change orders if the scope is increased.

Functional Area	Cost
Audit History	$165,487.94
Consolidated Assessments	$82,743.97
Enhanced Assessment-To-Verification Workflows	$248,231.97
Verification Detail	$82,743.97
Unplanned Enhancements	$165,487.94
TOTAL	**$744,695.79**

CONTRACT CHANGE NOTICE

Change Notice Number **1**

to

Contract Number **200000000304**

<table>
<tr><td rowspan="7">CONTRACTOR</td><td colspan="2">KUNZ LEIGH & ASSOCIATES INC</td></tr>
<tr><td colspan="2">28081 Southfield Road</td></tr>
<tr><td colspan="2">Lathrup Village, MI 48076-2816</td></tr>
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</table>

<table>
<tr><td rowspan="6">STATE</td><td>Program Manager</td><td>Various</td><td>MDARD</td></tr>
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<tr><td></td><td></td><td></td></tr>
<tr><td rowspan="3">Contract Administrator</td><td>Jarrod Barron</td><td>DTMB</td></tr>
<tr><td colspan="2">(517) 249-0406</td></tr>
<tr><td colspan="2">barronj1@michigan.gov</td></tr>
</table>

CONTRACT SUMMARY

MDARD MAEAP VERIFICATION SYSTEM

INITIAL EFFECTIVE DATE	INITIAL EXPIRATION DATE	INITIAL AVAILABLE OPTIONS	EXPIRATION DATE BEFORE
January 15, 2020	January 15, 2025	5 - 1 Year	January 15, 2025

PAYMENT TERMS	DELIVERY TIMEFRAME

ALTERNATE PAYMENT OPTIONS			EXTENDED PURCHASING	
☐ P-Card	☐ PRC	☐ Other	☐ Yes	☒ No

MINIMUM DELIVERY REQUIREMENTS

DESCRIPTION OF CHANGE NOTICE

OPTION	LENGTH OF OPTION	EXTENSION	LENGTH OF EXTENSION	REVISED EXP. DATE
☐		☐		January 15, 2025

CURRENT VALUE	VALUE OF CHANGE NOTICE	ESTIMATED AGGREGATE CONTRACT VALUE	
$1,869,920.00	$0.00	$1,869,920.00	

DESCRIPTION

Effective 1/5/2021, the parties transfer the maintenance services scope from this contract to new Contract 171-210000000295 using a consolidated maintenance services delivery model for multiple systems. Contractor will continue to system implementation and enhancement services through this contract. All other terms, conditions, specification and pricing remain the same. Per Contractor, Agency, DTMB Procurement and State Administrative Board approval on 1/5/2021.

Program Managers
for
Multi-Agency and Statewide Contracts

AGENCY	NAME	PHONE	EMAIL
DTMB	Laura Brancheau	517-335-1334	brancheaul@michigan.gov
MDARD	Joseph Kelpinski	586-206-2862	kelpinskij@michigan.gov

STATE OF MICHIGAN PROCUREMENT
Department of Technology, Management & Budget
525 W. Allegan Street, Lansing, MI 48909

NOTICE OF CONTRACT

NOTICE OF CONTRACT NO. **171-200000000304**
between
THE STATE OF MICHIGAN
and

CONTRACTOR	
	Kunz, Leigh & Associates
	28081 Southfield Road
	Lathrup Village, MI 48076-2816
	Justin Shaulis
	517-803-3217
	j.shaulis@kunzleigh.com
	CV0036059

STATE			
	Program Manager	Laura Brancheau	DTMB
		517-335-1334	
		BrancheauL@michigan.gov	
	Contract Administrator	Jarrod Barron	DTMB
		517-249-0406	
		BarronJ1@michigan.gov	

CONTRACT SUMMARY			
DESCRIPTION: MDARD MAEAP Verification System			
INITIAL EFFECTIVE DATE	**INITIAL EXPIRATION DATE**	**INITIAL AVAILABLE OPTIONS**	**EXPIRATION DATE BEFORE CHANGE(S) NOTED BELOW**
01/15/2020	01/15/2025	5-1 year	01/15/2025
PAYMENT TERMS		**DELIVERY TIMEFRAME**	
Net 45		N/A	
ALTERNATE PAYMENT OPTIONS			**EXTENDED PURCHASING**
☐ P-card ☐ Payment Request (PRC)		☐ Other	☐ Yes ☐ No
MINIMUM DELIVERY REQUIREMENTS			
N/A			
MISCELLANEOUS INFORMATION			
New Contract established from RFP# 190000002289.			
ESTIMATED CONTRACT VALUE AT TIME OF EXECUTION			**$1,869,920.00**

FOR THE CONTRACTOR:

Kunz, Leigh & Associates
Company Name

Justin Shaulis
Authorized Agent Signature

Justin Shaulis
Authorized Agent (Print or Type)

1-13-2020
Date

FOR THE STATE:

Jennifer Bronz
Signature

Jennifer Bronz – Category Manager, IT
Name & Title

DTMB – Central Procurement Services
Agency

1/14/2020
Date

STATE OF MICHIGAN

CONTRACT TERMS
CUSTOM SOFTWARE DEVELOPMENT

This CUSTOM SOFTWARE DEVELOPMENT CONTRACT (this "**Contract**") is agreed to between the State of Michigan (the "**State**") and Kunz, Leigh & Associates ("**Contractor**"), a Michigan Corporation. This Contract is effective on January 15, 2020 ("**Effective Date**"), and unless earlier terminated, will expire on January 15, 2025 (the "**Term**").

This Contract may be renewed for up to five (5) additional one (1) additional year period(s). Renewal must be by written agreement of the parties and will automatically extend the Term of this Contract.

The parties agree as follows:

1. **Definitions**. For purposes of this Contract, the following terms have the following meanings:

    "**Acceptance**" has the meaning set forth in **Section 10.5.**

    "**Acceptance Tests**" means such tests as may be conducted in accordance with **Section 10** and the Statement of Work to determine whether any Software Deliverable meets the requirements of this Contract and the Specifications and Documentation.

    "**Affiliate**" means any entity which directly or indirectly controls, is controlled by or is under common control of Contractor. The term "control" means the possession of the power to direct or cause the direction of the management and the policies of an entity, whether through the ownership of a majority of the outstanding voting rights or by contract or otherwise.

    "**Aggregate Software**" means the Software, as a whole, to be developed or otherwise provided under the Statement of Work. For avoidance of doubt, if the Statement of Work provides for a single Software Deliverable, such Software Deliverable also constitutes Aggregate Software.

    "**Allegedly Infringing Materials**" has the meaning set forth in **Section Error! Reference source not found.**

    "**API**" means all Application Programming Interfaces and associated API Documentation provided by Contractor, and as updated from time to time, to allow the Software to integrate with various State and Third Party Software.

"**Approved Open-Source Components**" means Open-Source Components that the State has approved to be included in or used in connection with any Software developed or provided under this Contract, and are specifically identified in the Statement of Work.

"**Approved Third-Party Materials**" means Third-Party Materials that the State has approved to be included in or for use in connection with any Software developed or provided under this Contract, and are specifically identified in the Statement of Work.

"**Authorized Users**" means all Persons authorized by the State to access and use the Software under this Contract, subject to the maximum number of users specified in the applicable Statement of Work.

"**Background Technology**" means all Software, data, know-how, ideas, methodologies, specifications, and other technology in which Contractor owns such Intellectual Property Rights as are necessary for Contractor to grant the rights and licenses set forth in **Section 15.1,** and for the State (including its licensees, successors and assigns) to exercise such rights and licenses, without violating any right of any Third Party or any Law or incurring any payment obligation to any Third Party. Background Technology must: (a) be identified as Background Technology in the Statement of Work; and (b) have been developed or otherwise acquired by Contractor prior to the date of the RFP.

"**Business Day**" means a day other than a Saturday, Sunday or other day on which the State is authorized or required by Law to be closed for business.

"**Business Owner**" is the individual appointed by the end-user agency procuring the software to (a) act as such agency's representative in all matters relating to the Contract, and (b) co-sign off on the State's notice of Acceptance for all Software Deliverables and Aggregate Software. The Business Owner will be identified in the Statement of Work**.**

"**Business Requirements Specification**" means the specification setting forth the State's business requirements regarding the features and functionality of the Software, as set forth in the Statement of Work.

"**Change**" has the meaning set forth in **Section 2.2.**

"**Change Notice**" has the meaning set forth in **Section 2.2(b).**

"**Change Proposal**" has the meaning set forth in **Section 2.2(a).**

"**Change Request**" has the meaning set forth in **Section 2.2.**

"**Confidential Information**" has the meaning set forth in **Section 23.1.**

"**Contract**" has the meaning set forth in the preamble.

"**Contract Administrator**" is the individual appointed by each party to (a) administer the terms of this Contract, and (b) approve and execute any Change Notices under this Contract. Each party's Contract Administrator will be identified in the Statement of Work.

"**Contractor**" has the meaning set forth in the preamble.

"**Contractor's Bid Response**" means the Contractor's proposal submitted in response to the RFP.

"**Contractor Personnel**" means all employees of Contractor or any Permitted Subcontractors involved in the performance of Services or providing Work Product under this Contract.

"**Deliverables**" means all Software Deliverables and all other documents, Work Product, and other materials that Contractor is required to or otherwise does provide to the State under this Contract and otherwise in connection with any Services, including all items specifically identified or defined as Deliverables in the Statement of Work.

"**Derivative Work**" means any modification, addition, upgrade, update, or improvement of the Software and any other work constituting a derivative work under the United States Copyright Act, 17 U.S.C. Section 101, *et seq.*

"**Dispute Resolution Procedure**" means the procedure for resolving disputes under this Contract as set forth in **Section 27.**

"**Documentation**" means all user manuals, operating manuals, technical manuals and any other instructions, specifications, documents and materials, in any form or media, that describe the functionality, installation, testing, operation, use, maintenance, support and technical and other components, features and requirements of any Software.

"**DTMB**" means the Michigan Department of Technology, Management and Budget.

"**Effective Date**" has the meaning set forth in the preamble.

"**Fees**" has the meaning set forth in **Section 12.1**.

"**Financial Audit Period**" has the meaning set forth in **Section 25.1.**

"**Force Majeure**" has the meaning set forth in **Section 28.8.**

"**Harmful Code**" means any: (a) virus, trojan horse, worm, backdoor or other software or hardware devices the effect of which is to permit unauthorized access to, or to disable, erase, or otherwise harm, any computer, systems or software; or (b) time bomb, drop dead device, or other software or hardware device designed to disable a computer program automatically with the passage of time or under the positive control of any Person, or otherwise prevent, restrict or impede the State's or any Authorized User's use of such software.

"**Implementation Plan**" means the schedule included in the Statement of Work setting forth the sequence of events for the performance of Services under the Statement of Work, including the Milestones and Milestone Dates.

"**Intellectual Property Rights**" means all or any of the following: (a) patents, patent disclosures, and inventions (whether patentable or not); (b) trademarks, service marks, trade dress, trade names, logos, corporate names, and domain names, together with all of the associated goodwill; (c) copyrights and copyrightable works (including computer programs), mask works and rights in data and databases; (d) trade secrets, know-how and other confidential information; and (e) all other intellectual property rights, in each case whether registered or unregistered and including all applications for, and renewals or extensions of, such rights, and all similar or equivalent rights or forms of protection provided by applicable Law in any jurisdiction throughout the world.

"**Intended Users**" means the users that are intended to use Software or particular features or functions of the Software, as described in the Specifications for such Software.

"**Key Personnel**" means any Contractor Personnel identified as key personnel in the Statement of Work.

"**Law**" means any statute, law, ordinance, regulation, rule, code, order, constitution, treaty, common law, judgment, decree, other requirement or rule of law of any federal, state, local or foreign government or political subdivision thereof, or any arbitrator, court, or tribunal of competent jurisdiction.

"**Loss or Losses**" means all losses, damages, liabilities, deficiencies, claims, actions, judgments, settlements, interest, awards, penalties, fines, costs or expenses of whatever kind, including reasonable attorneys' fees and the costs of enforcing any right to indemnification hereunder and the cost of pursuing any insurance providers.

"**Maintenance and Support Schedule**" means the schedule attached as **Schedule C**, setting forth the Support Services, the Support Fees, and the parties' additional rights and obligations with respect to such services.

"**Milestone**" means an event or task described in the Implementation Plan under the Statement of Work that must be completed by the corresponding Milestone Date.

"**Milestone Date**" means the date by which a particular Milestone must be completed as set forth in the Implementation Plan under the Statement of Work.

"**Non-Conformity**" or "**Non-Conformities**" means any failure of any: (a) Software or Documentation to conform to the requirements of this Contract (including the Statement of Work) or (b) Software to conform to the requirements of this Contract or the Specifications or Documentation.

"**Object Code**" means computer programs assembled or compiled in magnetic or electronic binary form on software media, which are readable and useable by machines, but not generally readable by humans without reverse assembly, reverse compiling, or reverse engineering.

"**Open-Source Components**" means any software component that is subject to any open-source copyright license contract, including any GNU General Public License or GNU Library or Lesser Public License, or other license contract that substantially conforms to the Open Source Initiative's definition of "open source" or otherwise may require disclosure or licensing to any third party of any source code with which such software component is used or compiled.

"**Open-Source License**" has the meaning set forth in **Section 3.3.**

"**Operating Environment**" means, collectively, the State platform and environment on, in, or under which Software is intended to be installed and operate, as set forth in the Statement of Work, including such structural, functional and other features, conditions and components as hardware, operating software and system architecture and configuration.

"**Permitted Subcontractor**" has the meaning set forth in **Section 5.4.**

"**Person**" means an individual, corporation, partnership, joint venture, limited liability company, governmental authority, unincorporated organization, trust, association, or other entity.

"**Pricing**" means any and all fees, rates and prices payable under this Contract, including pursuant to any Schedule or Exhibit hereto.

"**Pricing Schedule**" means the schedule attached as **Schedule B**, setting forth the fees, rates and prices payable under this Contract.

"**Project Manager**" is the individual appointed by each party to (a) monitor and coordinate the day-to-day activities of this Contract, and (b) in the case of the State, co-sign off on its notice of Acceptance for all Software Deliverables and Aggregate Software. Each party's Project Manager will be identified in the Statement of Work.

"**Representatives**" means a party's employees, officers, directors, partners, shareholders, agents, attorneys, successors and permitted assigns.

"**RFP**" means the State's request for proposal designed to solicit responses for Services under this Contract.

"**Service Level Agreement**" means, if applicable, the service level agreement attached as **Schedule E** to this Contract, setting forth Contractor's obligations with respect to the hosting, management and operation of the Software.

"**Services**" means any of the services Contractor is required to or otherwise does provide under this Contract, the Statement of Work, the Maintenance and Support Schedule (if applicable), or the Service Level Agreement (if applicable).

"**Site**" means the physical location designated by the State in, or in accordance with, this Contract or the Statement of Work for delivery and installation of any Software.

"**Software**" means the computer program(s), including programming tools, scripts and routines, the Contractor is required to or otherwise does develop or otherwise provide under this Contract, as described more fully in the Statement of Work, including all updates, upgrades, new versions, new releases, enhancements, improvements, and other modifications made or provided under the Support Services. As context dictates, Software may refer to one or more Software Deliverables or Aggregate Software.

"**Software Deliverable**" means any Software, together with its Documentation, required to be delivered as set forth in the Statement of Work.

"**Source Code**" means the human readable source code of the Software to which it relates, in the programming language in which such Software was written, together with all related flow charts and technical documentation, including a description of the procedure for generating object code, all of a level sufficient to enable a programmer reasonably fluent in such programming language to understand, operate, support, maintain and develop modifications, upgrades, updates, enhancements, improvements and new versions of, and to develop computer programs compatible with, such Software.

"**Specifications**" means, for any Software, the specifications collectively set forth in the Business Requirements Specification and Technical Specification, together with any other specifications set forth in the Statement of Work or any attachment thereto.

"**State**" means the State of Michigan.

"**State Data**" has the meaning set forth in **Section 22.1.**

"**State Materials**" means all materials and information, including documents, data, know-how, ideas, methodologies, specifications, software, content and technology, in any form or media, directly or indirectly provided or made available to Contractor by or on behalf of the State in connection with this Contract, whether or not the same: (a) are owned by the State, a Third Party or in the public domain; or (b) qualify for or are protected by any Intellectual Property Rights.

"**State Resources**" has the meaning set forth in **Section 7.1.**

"**Statement of Work**" means the statement of work attached as **Schedule A** to the Contract.

"**Stop Work Order"** has the meaning set forth in **Section** 17.

"**Support Fees**" means the fees, if any, payable by the State for the Support Services as required under the Maintenance and Support Schedule (as applicable) or the Service Level Agreement (as applicable.

"**Support Commencement Date**" means, with respect to any Software, the date on which the Warranty Period for such Software expires or such other date as may be set forth in the Maintenance and Support Schedule, the Service Level Agreement, or the Statement of Work.

"**Support Services**" means the software maintenance and support services Contractor is required to or otherwise does provide to the State under the Maintenance and Support Schedule (if applicable) or the Service Level Agreement (if applicable).

"**Technical Specification**" means, with respect to any Software, the document setting forth the technical specifications for such Software and included in the Statement of Work.

"**Term**" has the meaning set forth in the preamble**.**

"**Testing Period**" has the meaning set forth in **Section 10.1.**

"**Third Party**" means any Person other than the State or Contractor.

"**Third-Party Materials**" means any materials and information, including documents, data, know-how, ideas, methodologies, specifications, software, content, and technology, in any form or media, in which any Person other than the State or Contractor owns any Intellectual Property Right, but excluding Open-Source Components.

"**Transition Period**" has the meaning set forth in **Section 16.3.**

"**Transition Responsibilities**" has the meaning set forth in **Section 16.3.**

"**Unauthorized Removal**" has the meaning set forth in **Section 5.3(b).**

"**Unauthorized Removal Credit**" has the meaning set forth in **Section 5.3(c).**

"**User Data**" means all data, information and other content of any type and in any format, medium or form, whether audio, visual, digital, screen, GUI or other, that is input, uploaded to, placed into or collected, stored, processed, generated or output by any device, system or network by or on behalf of the State, including any and all works, inventions, data, analyses and other information and materials resulting from any use of the Software by or on behalf of the State under this Contract, except that User Data does not include the Software or data, information or content, including any GUI, audio, visual or digital or other display or output, that is generated automatically upon executing the Software without additional user input.

"**Warranty Period**" means, for any Software, unless otherwise specified in the Statement of Work, the ninety (90) calendar-day period commencing (a) in the case of Aggregate Software, upon the State's Acceptance; and (b) in the case of any updates, upgrades, new versions, new releases, enhancements and other modifications to previously-Accepted Aggregate Software, upon the State's receipt of such modification.

"**Work Product**" means all Software, API, Documentation, Specifications, and other documents, work product and related materials, that Contractor is required to, or otherwise does, provide to the State under this Contract, together with all ideas, concepts, processes, and methodologies developed in connection with this Contract whether or not embodied in this Contract.

2. Statement of Work. Contractor shall provide Services and Deliverables pursuant to the Statement of Work. The terms and conditions of this Contract will apply at all times to the Statement of Work. The State shall have the right to terminate the Statement of Work as set forth in **Section 16.** Contractor acknowledges that time is of the essence with respect to Contractor's obligations under the Statement of Work and agrees that prompt and timely performance of all such obligations in accordance with this Contract and the Statement of Work (including the Implementation Plan and all Milestone Dates) is strictly required.

2.1   Statement of Work Requirements. The Statement of Work will include the following:

(a)   names and contact information for Contractor's Contract Administrator, Project Manager and Key Personnel;

(b)   names and contact information for the State's Contract Administrator, Project Manager and Business Owner;

(c)   a detailed description of the Services to be provided under this Contract, including any training obligations of Contractor;

(d)   a detailed description of the Software and other Work Product to be developed or otherwise provided under this Contract, including the:

(i)   Business Requirements Specification;

(ii)   Technical Specification; and

(iii)   a description of the Documentation to be provided;

(e)   an Implementation Plan, including all Milestones, the corresponding Milestone Dates and the parties' respective responsibilities under the Implementation Plan;

(f)   the due dates for payment of Fees and any invoicing requirements, including any Milestones on which any such Fees are conditioned, and such other information as the parties deem necessary;

(g)   disclosure of all Background Technology, Approved Third-Party Materials, Approved Open-Source Components (each identified on a separate exhibit to the Statement of Work), in each case accompanied by such related documents as may be required by this Contract;

(h)   description of all liquidated damages associated with this Contract; and

(i)   a detailed description of all State Resources required to complete the Implementation Plan.

2.2   Change Control Process. The State may at any time request in writing (each, a "**Change Request**") changes to the Statement of Work, including changes to the Services, Work Product, Implementation Plan, or any Specifications (each, a "**Change**"). Upon the State's submission of a Change Request, the parties will evaluate and implement all Changes in accordance with this **Section 2.2.**

(a)   As soon as reasonably practicable, and in any case within twenty (20) Business Days following receipt of a Change Request, Contractor will provide the State with a written proposal for implementing the requested Change ("**Change Proposal**"), setting forth:

(i)   a written description of the proposed Changes to any Services, Work Product, or Deliverables;

(ii)   an amended Implementation Plan reflecting: (A) the schedule for commencing and completing any additional or modified Services, Work Product, or Deliverables; and (B) the effect of such Changes, if any, on completing any other Services or Work Product under the Statement of Work;

(iii)   any additional Third-Party Materials, Open-Source Components, and State Resources Contractor deems necessary to carry out such Changes; and

(iv)   any increase or decrease in Fees resulting from the proposed Changes, which increase or decrease will reflect only the increase or decrease in time and expenses Contractor requires to carry out the Change.

(b)   Within thirty (30) Business Days following the State's receipt of a Change Proposal, the State will by written notice to Contractor, approve, reject, or propose modifications to such Change Proposal. If the State proposes modifications, Contractor must modify and re-deliver the Change Proposal reflecting such modifications, or notify the State of any disagreement, in which event the parties will negotiate in good faith to resolve their disagreement. Upon the State's approval of the Change Proposal or the parties' agreement on all proposed modifications, as the case may be, the parties will

execute a written agreement to the Change Proposal ("**Change Notice**"), which Change Notice will be signed by the State's Contract Administrator and will constitute an amendment to the Statement of Work to which it relates; and

(c)   If the parties fail to enter into a Change Notice within fifteen (15) Business Days following the State's response to a Change Proposal, the State may, in its discretion:

(i)   require Contractor to perform the Services under the Statement of Work without the Change;

(ii)   require Contractor to continue to negotiate a Change Notice;

(iii)   initiate a Dispute Resolution Procedure; or

(iv)   notwithstanding any provision to the contrary in the Statement of Work, terminate this Contract under **Section 16.2.**

(d)   No Change will be effective until the parties have executed a Change Notice. Except as the State may request in its Change Request or otherwise in writing, Contractor must continue to perform its obligations in accordance with the Statement of Work pending negotiation and execution of a Change Notice. Contractor will use its best efforts to limit any delays or Fee increases from any Change to those necessary to perform the Change in accordance with the applicable Change Notice. Each party is responsible for its own costs and expenses of preparing, evaluating, negotiating, and otherwise processing any Change Request, Change Proposal, and Change Notice.

(e)   The performance of any functions, activities, tasks, obligations, roles and responsibilities comprising the Services as described in this Contract are considered part of the Services and, thus, will not be considered a Change. This includes the delivery of all Deliverables in accordance with their respective Specifications, and the diagnosis and correction of Non-Conformities discovered in Deliverables prior to their Acceptance by the State or, subsequent to their Acceptance by the State, as necessary for Contractor to fulfill its associated warranty requirements and its Support Services under this Contract.

(f)   Contractor may, on its own initiative and at its own expense, prepare and submit its own Change Request to the State. However, the State will be under no obligation to approve or otherwise respond to a Change Request initiated by Contractor.

3.   Software. Contractor will design, develop, create, test, deliver, install, configure, integrate, customize and otherwise provide and make fully operational Software as described in the Statement of Work on a timely and professional basis in accordance with all terms, conditions, and Specifications set forth in this Contract and the Statement of Work.

3.1   Software Specifications. Contractor will ensure all Software complies with the Specifications. Contractor will provide all Software to the State in both Object Code and Source Code form.

3.2   Third-Party Materials.

(a)   Contractor will not include in any Software, and operation of all Software in accordance with its Specifications and Documentation will not require, any Third-Party Materials, other than Approved Third-Party Materials, which must be specifically approved by the State and identified and described in the Statement of Work, and will be licensed to the State in accordance with **Section 15.3.**

(b)   Contractor must secure, at its sole cost and expense, all necessary rights, licenses, consents, approvals, and authorizations necessary for the State to use, perpetually and throughout the universe, all Approved Third-Party Materials as incorporated in or otherwise used in conjunction with Software as specified in the Statement of Work or elsewhere in this Contract.

3.3   Open-Source Components.   Contractor will not include in any Software, and operation of all Software in accordance with its Specifications and Documentation will not require the use of, any Open-Source Components, other than Approved Open-Source Components, which must be specifically approved by the State and identified and described in the Statement of Work, and for which the relevant open-source license(s) (each, an "**Open-Source License**") are attached as exhibits to the Statement of Work.   Contractor will provide the State with the Source Code for Approved Open-Source Components in accordance with the terms of the Open-Source License(s) at no cost to the State.

4.   Documentation.   Prior to or concurrently with the delivery of any Software, or by such earlier date as may be specified in the Implementation Plan for such Software, Contractor will provide the State with complete and accurate Documentation for such Software.   Where the Statement of Work requires or permits delivery of Software in two or more phases, Contractor will also provide the State with integrated Documentation for the Aggregate Software upon its delivery.

4.1   Adequacy of Documentation.   All Documentation must include all such information as may be reasonably necessary for the effective installation, testing, use, support, and maintenance of the applicable Software by the Intended User, including the effective configuration, integration, and systems administration of the Software and performance of all other functions set forth in the Specifications.

4.2   Documentation Specifications.   Contractor will provide all Documentation in both hard copy and electronic form, in such formats and media as are set forth in the Statement of Work, or as the State may otherwise reasonably request in writing.

4.3   Third-Party Documentation.   Other than Documentation for Approved Third-Party Materials and Approved Open-Source Components, no Documentation will consist of or include Third-Party Materials. To the extent Documentation consists of or includes Third-Party Materials, Contractor must secure, at its sole cost and expense, all rights, licenses, consents, approvals and authorizations specified in **Section 15.3** with respect to Approved Third-Party Materials.

5. Performance of Services. Contractor will provide all Services and Work Product in a timely, professional and workmanlike manner and in accordance with the terms, conditions, and Specifications set forth in this Contract and the Statement of Work.

    5.1   <u>Contractor Personnel</u>.

        (a)   Contractor is solely responsible for all Contractor Personnel and for the payment of their compensation, including, if applicable, withholding of income taxes, and the payment and withholding of social security and other payroll taxes, unemployment insurance, workers' compensation insurance payments and disability benefits.

        (b)   Prior to any Contractor Personnel performing any Services, Contractor will:

            (i)   ensure that such Contractor Personnel have the legal right to work in the United States;

            (ii)   require such Contractor Personnel to execute written agreements, in form and substance acceptable to the State, that bind such Contractor Personnel to confidentiality provisions that are at least as protective of the State's information (including all Confidential Information) as those contained in this Contract and Intellectual Property Rights provisions that grant the State rights in the Work Product consistent with the provisions of **Section 14.1** and, upon the State's request, provide the State with a copy of each such executed Contract; and

            (iii)   upon request, perform background checks on all Contractor Personnel prior to their assignment. The scope is at the discretion of the State and documentation must be provided as requested. Contractor is responsible for all costs associated with the requested background checks. The State, in its sole discretion, may also perform background checks on Contractor Personnel.

        (c)   Contractor and all Contractor Personnel will comply with all rules, regulations, and policies of the State that are communicated to Contractor in writing, including security procedures concerning systems and data and remote access, building security procedures, including the restriction of access by the State to certain areas of its premises or systems, and general health and safety practices and procedures.

        (d)   The State reserves the right to require the removal of any 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. Replacement personnel for the removed person must be fully qualified for the position. If the State exercises this right, and Contractor cannot immediately replace the removed personnel, the State agrees to negotiate an equitable adjustment in schedule or other terms that may be affected by the State's required removal.

5.2   Contractor's Project Manager. Throughout the Term of this Contract, Contractor must maintain a Contractor employee acceptable to the State to serve as Contractor's Project Manager, who will be considered Key Personnel of Contractor. Contractor's Project Manager will be identified in the Statement of Work.

        (a)   Contractor's Project Manager must:

                (i)   have the requisite authority, and necessary skill, experience, and qualifications, to perform in such capacity;

                (ii)   be responsible for overall management and supervision of Contractor's performance under this Contract; and

                (iii)   be the State's primary point of contact for communications with respect to this Contract, including with respect to giving and receiving all day-to-day approvals and consents.

        (b)   Contractor's Project Manager must attend all regularly scheduled meetings as set forth in the Implementation Plan, and will otherwise be available as set forth in the Statement of Work.

        (c)   Contractor will maintain the same Project Manager throughout the Term of this Contract, unless:

                (i)   the State requests in writing the removal of Contractor's Project Manager;

                (ii)   the State consents in writing to any removal requested by Contractor in writing;

                (iii)   Contractor's Project Manager ceases to be employed by Contractor, whether by resignation, involuntary termination or otherwise.

        (d)   Contractor will promptly replace its Project Manager on the occurrence of any event set forth in **Section 5.2(c).** Such replacement will be subject to the State's prior written approval.

5.3   Contractor's Key Personnel.

        (a)   The State has 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 will notify the State of the proposed assignment, introduce the individual to the State's Project Manager, and 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 will provide a written explanation including reasonable detail outlining the reasons for the rejection.

(b)   Contractor will not remove any Key Personnel from their assigned roles on this 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**"). An Unauthorized Removal 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. Any Unauthorized Removal may be considered by the State to be a material breach of this Contract, in respect of which the State may elect to terminate this Contract for cause under **Section 16.1.**

(c)   It is further acknowledged that an Unauthorized Removal will interfere with the timely and proper completion of this 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 16.1**, Contractor will issue to the State the corresponding credits set forth below (each, an "**Unauthorized Removal Credit**"):

(i)   For the Unauthorized Removal of any Key Personnel designated in the applicable Statement of Work, the credit amount will be $30,000 per individual if Contractor identifies a replacement approved by the State and assigns the replacement to shadow the Key Personnel who is leaving for a period of at least 30 calendar days before the Key Personnel's removal.

(ii)   If Contractor fails to assign a replacement to shadow the removed Key Personnel for at least 30 calendar days, in addition to the $30,000 credit specified above, Contractor will credit the State $1,000 per calendar day for each day of the 30 calendar-day shadow period that the replacement Key Personnel does not shadow the removed Key Personnel, up to $30,000 maximum per individual. The total Unauthorized Removal Credits that may be assessed per Unauthorized Removal and failure to provide 30 calendar days of shadowing will not exceed $60,000 per individual.

(d)   Contractor acknowledges and agrees that each of the Unauthorized Removal Credits assessed under **Subsection (c)** above: (i) is a reasonable estimate of and compensation for the anticipated or actual harm to the State that may arise from the Unauthorized Removal, which would be impossible or very difficult to accurately estimate; and (ii) may, at the State's option, be credited or set off against any Fees or other charges payable to Contractor under this Contract.

5.4   Subcontractors. Contractor will not, without the prior written approval of the State, which consent may be given or withheld in the State's sole discretion, engage any Third Party to perform Services (including to create any Work Product). The State's approval of any such Third Party (each approved Third Party, a "**Permitted Subcontractor**") does not relieve Contractor of its representations, warranties or obligations under this Contract. Without limiting the foregoing, Contractor will:

(a)   be responsible and liable for the acts and omissions of each such Permitted Subcontractor (including such Permitted Subcontractor's employees who, to the extent providing Services or creating Work Product, shall be deemed Contractor Personnel) to the same extent as if such acts or omissions were by Contractor or its employees;

(b)   name the State a third party beneficiary under Contractor's Contract with each Permitted Subcontractor with respect to the Services and Work Product;

(c)   be responsible for all fees and expenses payable to, by or on behalf of each Permitted Subcontractor in connection with this Contract, including, if applicable, withholding of income taxes, and the payment and withholding of social security and other payroll taxes, unemployment insurance, workers' compensation insurance payments and disability benefits; and

(d)   prior to the provision of Services or creation of Work Product by any Permitted Subcontractor:

(i)   obtain from such Permitted Subcontractor confidentiality, work-for-hire and intellectual property rights assignment agreements, in form and substance acceptable by the State, giving the State rights consistent with those set forth in **Section 14.1** and **Section 22** and, upon request, provide the State with a fully-executed copy of each such contract; and

(ii)   with respect to all Permitted Subcontractor employees providing Services or Work Product, comply with its obligations under **Section 5.1(b)**; and

(e)   notify the State of the location of the Permitted Subcontractor and indicate if it is located within the continental United States.

6.   **Data Privacy and Information Security**.

6.1   Undertaking by Contractor. Without limiting Contractor's obligation of confidentiality as further described, Contractor is responsible for establishing and maintaining a data privacy and information security program, including physical, technical, administrative, and organizational safeguards, that is designed to: (a) ensure the security and confidentiality of the State Data; (b) protect against any anticipated threats or hazards to the security or integrity of the State Data; (c) protect against unauthorized disclosure, access to, or use of the State Data; (d) ensure the proper disposal of State Data; and (e) ensure that all Contractor Representatives comply with all of the foregoing. In no case will the safeguards of Contractor's data privacy and information security program be less stringent than the safeguards used by the State, and Contractor must at all times comply with all applicable State IT policies, standards, and procedures ("**PSP**"), of which the publicly available PSPs are located at: https://www.michigan.gov/dtmb/0,5552,7-358-82547_56579_56755---,00.html.

6.2   Acceptable Use Policy. To the extent that Contractor has access to the State's computer system, Contractor must comply with the State's Acceptable Use Policy, see

https://www.michigan.gov/documents/dtmb/1340.00.01_Acceptable_Use_of_Information_Technology_Standard_458958_7.pdf. All Contractor Personnel will be required, in writing, to agree to the State's Acceptable Use Policy before accessing the State's system. The State reserves the right to terminate Contractor's access to the State's system if a violation occurs.

6.3   Security Accreditation Process. If requested by the State, Contractor must assist the State with its security accreditation process through the development, completion and ongoing updating of a system security plan using the State's automated governance, risk and compliance (GRC) platform

6.4   Right of Audit by the State. Without limiting any other audit rights of the State, the State has the right to review Contractor's data privacy and information security program prior to the commencement of Services and from time to time during the term of this Contract. During the providing of Services, on an ongoing basis from time to time and without notice, the State, at its own expense, is entitled to perform, or to have performed, an on-site audit of Contractor's data privacy and information security program. In lieu of an on-site audit, upon request by the State, Contractor agrees to complete, within forty-five (45) calendar days of receipt, an audit questionnaire provided by the State regarding Contractor's data privacy and information security program.

6.5   Audit Findings. With respect to State Data, Contractor must implement any required safeguards as identified by the State or by any audit of Contractor's data privacy and information security program.

6.6   State's Right to Termination for Deficiencies. The State reserves the right, at its sole election, to immediately terminate this Contract or the Statement of Work without limitation and without liability if the State determines that Contractor fails or has failed to meet its obligations under this **Section 6**.

6.7   Security Requirements for Externally Hosted Software. If the Operating Environment for the Software is externally hosted by Contractor or a subcontractor, Contractor shall comply with the security requirements set forth in **Schedule D** to this Contract.

7. **State Obligations**.

7.1   State Resources and Access. The State is responsible for:

(a)   providing the State Materials and such other resources as may be specified in the Statement of Work (collectively, "**State Resources**"); and

(b)   if the Software is internally hosted on State systems, providing Contractor Personnel with such access to the Site(s) and Operating Environment as is necessary for Contractor to perform its obligations on a timely basis as set forth in the Statement of Work.

7.2   State Project Manager. Throughout the Term of this Contract, the State will maintain a State employee to serve as the State's Project Manager under this Contract. The State's Project Manager will be identified in the Statement of Work.

8. Pre-Delivery Testing.

 8.1 <u>Testing By Contractor</u>. Before delivering and installing any Software Deliverable, Contractor must:

  (a) test the Software component of such Software Deliverable to confirm that it is fully operable, meets all applicable Specifications and will function in accordance with the Specifications and Documentation when properly installed in the Operating Environment;

  (b) scan such Software Deliverable using industry standard scanning software and definitions to confirm it is free of Harmful Code;

  (c) remedy any Non-Conformity or Harmful Code identified and retest and rescan the Software Deliverable; and

  (d) prepare, test and, as necessary, revise the Documentation component of the Software Deliverable to confirm it is complete and accurate and conforms to all requirements of this Contract.

 8.2 <u>State Participation</u>. The State has the right to be present for all pre-installation testing. Contractor must give the State at least fifteen (15) calendar days' prior notice of all such testing.

9. Delivery and Installation.

 9.1 <u>Delivery</u>. Contractor will deliver each Deliverable, and install all Software, on or prior to the applicable Milestone Date in accordance with the delivery criteria set forth in the Statement of Work. Contractor will deliver each Software Deliverable, including complete Documentation in compliance with **Section 4**, and the applicable Source Code. No Software Deliverable will be deemed to have been delivered or installed unless it complies with the preceding sentence.

 9.2 <u>Site Preparation</u>. If the Operating Environment for the Software is externally hosted by Contractor or a subcontractor, Contractor is responsible for ensuring the relevant Operating Environment is set up and in working order to allow Contractor to deliver and install the Software on or prior to the applicable Milestone Date. Contractor will provide the State with such notice as is specified in the Statement of Work, prior to delivery of the Software to give the State sufficient time to prepare for Contractor's delivery and installation of the Software. If the State is responsible for Site preparation, Contractor will provide such assistance as the State requests to complete such preparation on a timely basis.

10. Acceptance Testing; Acceptance.

 10.1 <u>Acceptance Testing</u>.

  (a) Unless otherwise specified in the Statement of Work, upon installation of each Software Deliverable, Acceptance Tests will be conducted as set forth in this **Section 10.1** to ensure the Software

Deliverable, including all Software and Documentation, conforms to the requirements of this Contract, including the applicable Specifications and, in the case of the Software, the Documentation.

(b)   All Acceptance Tests will take place at the designated Site(s) in the Operating Environment described in the Statement of Work for the Software Deliverable, commence on the Business Day following installation of such Software Deliverable and be conducted diligently for up to thirty (30) Business Days, or such other period as may be set forth in the Statement of Work (the "**Testing Period**"). Acceptance Tests will be conducted by the party responsible as set forth in the Statement of Work or, if the Statement of Work does not specify, the State, provided that:

> (i)   for Acceptance Tests conducted by the State, if requested by the State, Contractor will make suitable Contractor Personnel available to observe or participate in such Acceptance Tests; and

> (ii)   for Acceptance Tests conducted by Contractor, the State has the right to observe or participate in all or any part of such Acceptance Tests.

Contractor is solely responsible for all costs and expenses related to Contractor's performance of, participation in, and observation of Acceptance Testing.

(c)   Upon delivery and installation of the Aggregate Software, including any API, under the Statement of Work, additional Acceptance Tests will be performed on the Aggregate Software as a whole to ensure full operability, integration, and compatibility among all elements of the Aggregate Software ("**Integration Testing**"). Integration Testing is subject to all procedural and other terms and conditions set forth in **Section 10.1**, **Section 10.3**, and **Section 10.4**.

(d)   The State may suspend Acceptance Tests and the corresponding Testing Period by written notice to Contractor if the State discovers a material Non-Conformity in the tested Software Deliverable or part or feature of such Software Deliverable. In such event, Contractor will immediately, and in any case within ten (10) Business Days, correct such Non-Conformity, whereupon the Acceptance Tests and Testing Period will resume for the balance of the Testing Period.

10.2 Notices of Completion, Non-Conformities, and Acceptance. Within fifteen (15) Business Days following the completion of any Acceptance Tests, including any Integration Testing, the party responsible for conducting the tests will prepare and provide to the other party written notice of the completion of the tests. Such notice must include a report describing in reasonable detail the tests conducted and the results of such tests, including any uncorrected Non-Conformity in the tested Software Deliverables.

(a)   If such notice is provided by either party and identifies any Non-Conformities, the parties' rights, remedies, and obligations will be as set forth in **Section 10.3** and **Section 10.4.**

(b)   If such notice is provided by the State, is signed by the State's Business Owner and Project Manager, and identifies no Non-Conformities, such notice constitutes the State's Acceptance of such Software Deliverable or Aggregate Software.

(c) If such notice is provided by Contractor and identifies no Non-Conformities, the State will have thirty (30) Business Days to use such Software Deliverable in the Operating Environment and determine, in the exercise of its sole discretion, whether it is satisfied that such Software Deliverable or Aggregate Software contains no Non-Conformities, on the completion of which the State will, as appropriate:

(i) notify Contractor in writing of Non-Conformities the State has observed in the Software Deliverable or, in the case of Integration Testing, Aggregate Software, and of the State's non-acceptance thereof, whereupon the parties' rights, remedies and obligations will be as set forth in **Section 10.3** and **Section 10.4**; or

(ii) provide Contractor with a written notice of its Acceptance of such Software Deliverable or Aggregate Software, which must be signed by the State's Business Owner and Project Manager.

10.3 Failure of Acceptance Tests. If Acceptance Tests identify any Non-Conformities, Contractor, at Contractor's sole cost and expense, will remedy all such Non-Conformities and re-deliver the Software Deliverables, in accordance with the requirements set forth in the Statement of Work. Redelivery will occur as promptly as commercially possible and, in any case, within thirty (30) Business Days following, as applicable, Contractor's:

(a) completion of such Acceptance Tests, in the case of Acceptance Tests conducted by Contractor; or

(b) receipt of the State's notice under **Section 10.2(a)** or **Section 10.2(c)(i)**, identifying any Non-Conformities.

10.4 Repeated Failure of Acceptance Tests. If Acceptance Tests identify any Non-Conformity in any Software Deliverable after a second or subsequent delivery of such Software Deliverable, or Contractor fails to re-deliver the Software Deliverable on a timely basis, the State may, in its sole discretion, by written notice to Contractor:

(a) continue the process set forth in this **Section 10**;

(b) accept the Software Deliverable as a nonconforming deliverable, in which case the Fees Such Software Deliverable will be reduced equitably to reflect the value of the Software Deliverable as received relative to the value of the Software Deliverable had it conformed; or

(c) deem the failure to be a non-curable material breach of this Contract and the Statement of Work and terminate this Contract for cause in accordance with **Section 16.1.**

10.5 Acceptance. Acceptance ("**Acceptance**") of each Software Deliverable (subject, where applicable, to the State's right to Integration Testing) and Aggregate Software will occur on the date that

is the earliest of the State's delivery of a notice accepting such Software Deliverable under **Section 10.2(b),** or **Section 10.2(c)(ii).**

11. Training; Maintenance and Support; Hosting.

11.1 <u>Training</u>. With respect to all Software, Contractor will provide the State with initial training as set forth in the Statement of Work at the rates set forth in the Pricing Schedule. The State may request, and if so requested, Contractor must provide on a timely basis, additional training at the rates specified in the Pricing Schedule.

11.2 <u>Support Services for On-Premise Software</u>. If the Operating Environment for the Software is internally hosted by the State, Contractor will provide the State with the Support Services described in the Maintenance and Support Schedule attached as **Schedule C** to this Contract. Such Support Services will be provided:

(a)   Free of charge during the Warranty Period, it being acknowledged and agreed that the Fees includes full consideration for such Services during such period.

(b)   Thereafter, for so long as the State elects to receive Support Services for the Software, in consideration of the State's payment of Support as determined in accordance with the rates set forth in the Pricing Schedule.

11.3 <u>Support Services for Externally Hosted Software</u>. If the Operating Environment for the Software is externally hosted by Contractor or a subcontractor, Contractor shall provide the State with the Support Services described in the Service Level Agreement attached as **Schedule E** to this Contract. Such Support Services shall be provided:

(a)   Free of charge during the Warranty Period, it being acknowledged and agreed that the Fees includes full consideration for such Services during such period.

(b)   Thereafter, for so long as the State elects to receive Support Services for the Software, in consideration of the State's payment of Support Fees as determined in accordance with the rates set forth in the Pricing Schedule

11.4 <u>Hosting</u>. If the Operating Environment for the Software is externally hosted by Contractor or a subcontractor, Contractor will maintain the Availability Requirement and the Support Service Level Requirement set forth in the Service Level Agreement attached as **Schedule E** to this Contract.

12. Fees.

12.1 <u>Fees</u>. Subject to all terms and conditions set forth in this **Section 12** and Contractor's performance of Services to the State's satisfaction and the State's Acceptance of the applicable Deliverables, the State will pay the fees set forth in the Statement of Work and Pricing Schedule ("**Fees**").

12.2 Firm Pricing. The Pricing set forth in the Pricing Schedule is firm and may not be modified during the Term.

13. Invoices and Payment.

13.1 Invoices. Contractor will invoice the State for Fees in accordance with the requirements set forth in the Statement of Work, including any requirements that condition the rendering of invoices and the payment of Fees upon the successful completion of Milestones. Contractor must submit each invoice via such delivery means and to such address as are specified by the State in the Statement of Work. Each separate invoice must:

(a)   clearly identify the Contract to which it relates, in such manner as is required by the State;

(b)   list each Fee item separately;

(c)   include sufficient detail for each line item to enable the State to satisfy its accounting and charge-back requirements;

(d)   for Fees determined on a time and materials basis, report details regarding the number of hours performed during the billing period, the skill or labor category for such Contractor Personnel and the applicable hourly billing rates; and

(e)   include such other information as may be required by the State as set forth in the Statement of Work; and

(f)   itemized invoices must be submitted to DTMB-Accounts-Payable@michigan.gov.

13.2 Payment. Invoices are due and payable by the State, in accordance with the State's standard payment procedures as specified in 1984 Public Act no. 279, MCL 17.51, *et seq.*, within forty-five (45) calendar days after receipt, provided the State determines that the invoice was properly rendered. The State will only disburse payments under this Contract through Electronic Funds Transfer (EFT). Contractor must register with the State at http://www.michigan.gov/SIGMAVSS to receive electronic fund transfer payments. If Contractor does not register, the State is not liable for failure to provide payment.

13.3 Taxes. The State is exempt from State sales tax for direct purchases and may be exempt from federal excise tax, if Services or Deliverables purchased under this Contract are for the State's exclusive use.

13.4 Payment Disputes. The State may withhold from payment any and all payments and amounts the State disputes in good faith, pending resolution of such dispute, provided that the State:

(a)   timely renders all payments and amounts that are not in dispute;

(b)   notifies Contractor of the dispute prior to the due date for payment, specifying in such notice:

(i)   the amount in dispute; and

(ii)   the reason for the dispute set out in sufficient detail to facilitate investigation by Contractor and resolution by the parties;

(c)   works with Contractor in good faith to resolve the dispute promptly; and

(d)   promptly pays any amount determined to be payable by resolution of the dispute.

Contractor shall not withhold any Services or fail to perform any obligation hereunder by reason of the State's good faith withholding of any payment or amount in accordance with this **Section 13.4** or any dispute arising therefrom.

13.5   Right of Set Off. Without prejudice to any other right or remedy it may have, the State reserves the right to set off at any time any amount owing to it by Contractor against any amount payable by the State to Contractor under this Contract.

13.6   Payment Does Not Imply Acceptance. The making of any payment by the State, or Contractor's receipt of payment, will in no way affect the responsibility of Contractor to perform the Services in accordance with this Contract, and will not imply the State's acceptance of any Services or Deliverables or the waiver of any warranties or requirements of this Contract.

13.7   Support Not to be Withheld or Delayed. Contractor will not withhold, delay, or fail to perform any Services or obligations under this Contract by reason of the State's good faith withholding of any payment or amount in accordance with this **Section 13.**

14. Intellectual Property Rights.

14.1   State Ownership of Work Product. Except as set forth in **Section 14.3**, the State is and will be the sole and exclusive owner of all right, title, and interest in and to all Work Product, including all Intellectual Property Rights. In furtherance of the foregoing, subject to **Section 14.3**:

(a)   Contractor will create all Work Product as work made for hire as defined in Section 101 of the Copyright Act of 1976; and

(b)   to the extent any Work Product or Intellectual Property Rights do not qualify as, or otherwise fails to be, work made for hire, Contractor hereby:

(i)   assigns, transfers, and otherwise conveys to the State, irrevocably and in perpetuity, throughout the universe, all right, title, and interest in and to such Work Product, including all Intellectual Property Rights; and

(ii) irrevocably waives any and all claims Contractor may now or hereafter have in any jurisdiction to so-called "moral rights" or rights of *droit moral* with respect to the Work Product.

14.2 <u>Further Actions</u>. Contractor will, and will cause the Contractor Personnel to, take all appropriate action and execute and deliver all documents, necessary or reasonably requested by the State to effectuate any of the provisions or purposes of **Section 14.1**, or otherwise as may be necessary or useful for the State to prosecute, register, perfect, record, or enforce its rights in or to any Work Product or any Intellectual Property Right therein. Contractor hereby appoints the State as Contractor's attorney-in-fact with full irrevocable power and authority to take any such actions and execute any such documents if Contractor refuses, or within a period deemed reasonable by the State otherwise fails, to do so.

14.3 <u>Background Technology, Approved Third-Party Materials, and Open-Source Components</u>.

(a) Contractor is and will remain the sole and exclusive owner of all right, title, and interest in and to the Background Technology, including all Intellectual Property Rights therein, subject to the license granted in **Section 15.1**.

(b) Ownership of all Approved Third-Party Materials, and all Intellectual Property Rights therein, is and will remain with its respective owners, subject to any express licenses or sublicenses granted to the State under this Contract.

(c) Ownership of all Open-Source Components, and all Intellectual Property Rights therein, is and will remain with its respective owners, subject to the State's rights under the applicable Open-Source Licenses.

14.4 <u>State Materials</u>. The State will remain the sole and exclusive owners of all right, title, and interest in and to State Materials, including all Intellectual Property Rights therein. Contractor will have no right or license to, and will not, use any State Materials except solely during the Term of this Contract for which they are provided to the extent necessary to perform the Services and provide the Work Product to the State. All other rights in and to the State Materials are expressly reserved by the State.

15. **Licenses**.

15.1 <u>Background Technology License</u>. Contractor hereby grants to the State such rights and licenses with respect to the Background Technology that will allow the State to use and otherwise exploit perpetually throughout the universe for all or any purposes whatsoever the Work Product, to the same extent as if the State owned the Background Technology, without incurring any fees or costs to Contractor (other than the Fees set forth under this Contract) or any other Person in respect of the Background Technology. In furtherance of the foregoing, such rights and licenses will:

(a) be irrevocable, perpetual, fully paid-up and royalty-free;

(b)   include the rights to use, reproduce, perform (publicly or otherwise), display (publicly or otherwise), modify, improve, create Derivative Works of, distribute, import, make, have made, sell and offer to sell the Background Technology, including all such modifications, improvements and Derivative Works thereof, solely as part of, or as necessary to use and exploit, the Work Product; and

(c)   be freely assignable and sublicensable, in each case solely in connection with the assignment or licensing of the Work Product or any portion, modification, or Derivative Work thereof, and only to the extent necessary to allow the assignee or sublicensee, as the case may be, to use and exploit the Work Product or portion, modification, improvement, or Derivative Work thereof.

15.2 State Materials. The State hereby grants to Contractor the limited, royalty-free, non-exclusive right and license to State Materials solely as necessary to incorporate such State Materials into, or otherwise use such State Materials in connection with creating, the Work Product. The term of such license will commence upon the State's delivery of the State Materials to Contractor, and will terminate upon the State's acceptance or rejection of the Work Product to which the State Materials relate. Subject to the foregoing license, the State reserves all rights in the State Materials. All State Materials are considered Confidential Information of the State.

15.3 Approved Third-Party Materials.

(a)   Prior to the delivery date for any Deliverables under the Statement of Work, Contractor will secure for the State, at Contractor's sole cost and expense, such rights, licenses, consents and approvals for any Approved Third-Party Materials, that will allow the State to use and otherwise exploit perpetually throughout the universe for all or any purposes whatsoever the Work Product, to the same extent as if the State owned the Approved Third-Party Materials, without incurring any fees or costs to any Third-Party (other than the Fees set forth under this Contract) in respect of the Approved Third-Party Materials.

(b)   All royalties, license fees, or other consideration payable in respect of such licenses are included in the Fees specified in the Statement of Work. Any additional amounts will be the sole responsibility of Contractor.

(c)   Contractor acknowledges that the State cannot indemnify any third parties, including but not limited to any third-party software providers that provide Third-Party Materials, and that notwithstanding anything to the contrary contained in any third-party software license agreement or end user license agreement, the State will not indemnify any third-party software provider for any reason whatsoever.

15.4 Open-Source Components. Any use of the Open-Source Components by the State will be governed by, and subject to, the terms and conditions of the applicable Open-Source Licenses.

16. Termination, Expiration, Transition. The State may terminate this Contract, in whole or in part, including the Support Services for all or any Software, or any Statement of Work, in accordance with the following:

16.1 Termination for Cause.

(a)   The State may terminate this Contract for cause, in whole or in part, if Contractor, as determined by the State: (i) endangers the value, integrity, or security of any State system, data, facility or personnel; (ii) becomes insolvent, petitions for bankruptcy court proceedings, or has an involuntary bankruptcy proceeding filed against it by any creditor; (iii) engages in any conduct that may expose the State to liability; (iv) breaches any of its material duties or obligations under this Contract; or (v) underperforms as specified in the Statement of Work. Any reference to specific breaches being material breaches within this Contract will not be construed to mean that other breaches are not material.

(b)   If the State terminates this Contract under this **Section 16.1**, the State will issue a termination notice specifying whether Contractor must: (a) cease performance immediately, or (b) continue to perform for a specified period. If it is later determined that Contractor was not in breach of this Contract, the termination will be deemed to have been a termination for convenience, effective as of the same date, and the rights and obligations of the parties will be limited to those provided in **Section 16.2**.

(c)   The State will only pay for amounts due to Contractor for Services and Deliverables accepted by the State on or before the date of termination, subject to the State's right to set off any amounts owed by the Contractor for the State's reasonable costs in terminating this Contract. Contractor must promptly reimburse to the State any Fees prepaid by the State prorated to the date of such termination, including any prepaid Support Fees. The Contractor must pay all reasonable costs incurred by the State in terminating this Contract for cause, including administrative costs, attorneys' fees, court costs, transition costs, and any costs the State incurs to procure the Services from other sources.

16.2 Termination for Convenience. The State may immediately terminate this Contract in whole or in part, without penalty and for any reason, including but not limited to, appropriation or budget shortfalls. The termination notice will specify whether Contractor must: (a) cease performance immediately, or (b) continue to perform in accordance with **Section 16.3**. If the State terminates this Contract for convenience, the State will pay all reasonable costs, as determined by the State, for State approved Transition Responsibilities to the extent funds are available.

16.3 Transition Responsibilities. Upon termination or expiration of this Contract for any reason, Contractor must, for a period of time specified by the State (not to exceed 180 calendar days, unless otherwise agreed to by the parties)(the "**Transition Period**"), provide all reasonable transition assistance requested by the State, to allow for the expired or terminated portion of the Contract to continue without interruption or adverse effect, and to facilitate the orderly transfer of the Services to the State or its designees. Such transition assistance may include but is not limited to: (a) continuing to perform the Services at the established Contract rates; (b) taking all reasonable and necessary measures to transition performance of the work, including all applicable Services and Deliverables to the State or the State's designee; (c) taking all necessary and appropriate steps, or such other action as the State may direct, to preserve, maintain, protect, or return to the State all State Materials and State Data; (d) transferring title in and delivering to the State, at the State's discretion, all completed or partially completed Deliverables

prepared under this Contract as of the Contract termination or expiration date; and (e) preparing an accurate accounting from which the State and Contractor may reconcile all outstanding accounts (collectively, the "**Transition Responsibilities**"). This Contract is automatically extended through the end of the Transition Period.

16.4 <u>Effect of Expiration or Termination</u>.

(a) Upon termination or expiration of this Contract for any reason:

(i) Contractor will be obligated to perform all Transition Responsibilities specified in **Section 16.3**.

(ii) All licenses granted to Contractor in the State Materials and State Data will immediately and automatically also terminate. Contractor must promptly return to the State all State Materials and State Data not required by Contractor for its Transition Responsibilities, if any.

(iii) Contractor will (A) return to the State all documents and tangible materials (and any copies) containing, reflecting, incorporating, or based on the State's Confidential Information, (B) permanently erase the State's Confidential Information from its computer systems and (C) certify in writing to the State that it has complied with the requirements of this **Section 16.4(a)(iii)**, in each case to the extent such materials are not required by Contractor for Transition Responsibilities, if any.

(b) No expiration or termination of this Contract will affect the State's rights in any of the Deliverables that have already been paid for by the State.

16.5 <u>Survival</u>. This **Section 16** survives termination or expiration of this Contract.

17. Stop Work Order. The State may, at any time, order the Services of Contractor fully or partially stopped for its own convenience for up to ninety (90) calendar days at no additional cost to the State. The State will provide Contractor a written notice detailing such suspension (a "**Stop Work Order**"). Contractor must comply with the Stop Work Order upon receipt. Within 90 days, or any longer period agreed to by Contractor, the State will either: (a) issue a notice authorizing Contractor to resume work, or (b) terminate this Contract. The State will not pay for any Services, Contractor's lost profits, or any additional compensation during a stop work period.

18. Contractor Representations and Warranties.

18.1 <u>Authority</u>. Contractor represents and warrants to the State that:

(a) It is duly organized, validly existing, and in good standing as a corporation or other entity as represented under this Contract under the laws and regulations of its jurisdiction of incorporation, organization, or chartering;

(b)   It has the full right, power, and authority to enter into this Contract, to grant the rights and licenses granted under this Contract, and to perform its contractual obligations;

(c)   The execution of this Contract by its Representative has been duly authorized by all necessary organizational action;

(d)   When executed and delivered by Contractor, this Contract will constitute the legal, valid, and binding obligation of Contractor, enforceable against Contractor in accordance with its terms; and

(e)   Contractor is neither currently engaged in nor will engage in the boycott of a person based in or doing business with a strategic partner as described in 22 USC 8601 to 8606.

18.2 Bid Response. Contractor represents and warrants to the State that:

(a)   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 to the RFP; 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;

(b)   All written information furnished to the State by or for Contractor in connection with this Contract, including Contractor's Bid Response, 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;

(c)   Contractor 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 within the previous five (5) years for the reason that Contractor failed to perform or otherwise breached an obligation of the contract; and

(d)   If any of the certifications, representations, or disclosures made in Contractor's Bid Response change after contract award, the Contractor is required to report those changes immediately to the Contract Administrator.

18.3 Software and Service. Contractor represents and warrants to the State that:

(a)   It will perform all Services in a professional and workmanlike manner in accordance with best industry standards and practices for similar services, using personnel with the requisite skill, experience and qualifications, and will devote adequate resources to meet its obligations under this Contract;

(b)   It is in compliance with, and will perform all Services in compliance with, all applicable Law;

(c)   The State will receive good and valid title to the Software, free and clear of all encumbrances and liens of any kind;

(d)   When delivered and installed by Contractor, the Software will not contain any Harmful Code;

(e)   The Software will not contain, or operate in such a way that it is compiled with or linked to, any Open-Source Components other than Approved Open-Source Components;

(f)   The Software will not contain, or operate in such a way that it is compiled with or linked to, any Third-Party Materials other than Approved Third-Party Materials;

(g)   The Software, including all updates, upgrades, new versions, new releases, enhancements, improvements and other modifications thereof, but excluding components comprising State Materials, Approved Third-Party Materials, and Open-Source Components, is or will be the original creation of Contractor;

(h)   As delivered, installed, specified, or approved by Contractor and used by the State or any Third Party authorized by the State, the Software: (i) will not infringe, misappropriate, or otherwise violate any Intellectual Property Right or other right of any third party; and (ii) will comply with all applicable Laws;

(i)   No expiration or loss of any patent or application for patent rights in the Software is pending, or, to Contractor's knowledge after reasonable inquiry, threatened or reasonably foreseeable, and Contractor has no reason to believe that any claims of any such patent or patent application are or will be invalid, unenforceable, fail to issue, or be materially limited or restricted beyond the current claims, except for patent rights expiring at the end of their statutory term; and

(j)   All Software will be, and as installed in the Operating Environment (or any successor thereto), will function in all respects, in conformity with this Contract and the Specifications and Documentation.

19. Indemnification.

19.1 <u>General Indemnification</u>. Contractor must defend, indemnify and hold the State, its departments, divisions, agencies, offices, commissions, officers, and employees harmless, without limitation, from and against any and all actions, claims, losses, liabilities, damages, costs, attorney fees, and expenses (including those required to establish the right to indemnification), arising out of or relating to: (a) any breach by Contractor (or any of Contractor's employees, agents, subcontractors, or by anyone else for whose acts any of them may be liable) of any of the promises, agreements, representations, warranties, or insurance requirements contained in this Contract; (b) any infringement, misappropriation, or other violation of any Intellectual Property Right or other right of any Third Party; and (c) any bodily injury, death, or damage to real or tangible personal property occurring wholly or in part due to action or inaction by Contractor (or any of Contractor's employees, agents, subcontractors, or by anyone else for whose acts any of them may be liable).

19.2 Indemnification Procedure. The State will notify Contractor in writing if indemnification is sought; however, failure to do so will not relieve Contractor, except to the extent that Contractor is materially prejudiced. Contractor must, to the satisfaction of the State, demonstrate its financial ability to carry out these obligations. The State is entitled to: (i) regular updates on proceeding status; (ii) participate in the defense of the proceeding; (iii) employ its own counsel; and to (iv) retain control of the defense, at its own cost and expense, if the State deems necessary. Contractor will not, without the State's prior written consent (not to be unreasonably withheld), settle, compromise, or consent to the entry of any judgment in or otherwise seek to terminate any claim, action, or proceeding. Any litigation activity on behalf of the State or any of its subdivisions, under this **Section 19**, must be coordinated with the Department of Attorney General. An attorney designated to represent the State may not do so until approved by the Michigan Attorney General and appointed as a Special Assistant Attorney General.

19.3 Infringement Remedies.

(a)   The remedies set forth in this **Section 19.3** are in addition to, and not in lieu of, all other remedies that may be available to the State under this Contract or otherwise, including the State's right to be indemnified for such actions.

(b)   If any Software or any component thereof, other than State Materials, is found to be infringing or if any use of any Software or any component thereof is enjoined, threatened to be enjoined or otherwise the subject of an infringement claim, Contractor must, at Contractor's sole cost and expense:

(i)   procure for the State the right to continue to use such Software or component thereof to the full extent contemplated by this Contract; or

(ii)   modify or replace the materials that infringe or are alleged to infringe ("**Allegedly Infringing Materials**") to make the Software and all of its components non-infringing while providing fully equivalent features and functionality.

(c)   If neither of the foregoing is possible notwithstanding Contractor's best efforts, then Contractor may direct the State to cease any use of any materials that have been enjoined or finally adjudicated as infringing, provided that Contractor will:

(i)   refund to the State all amounts paid by the State in respect of such Allegedly Infringing Materials and any other aspects of the Aggregate Software provided under the Statement of Work for the Allegedly Infringing Materials that the State cannot reasonably use as intended under this Contract; and

(ii)   in any case, at its sole cost and expense, secure the right for the State to continue using the Allegedly Infringing Materials for a transition period of up to six (6) months to allow the State to replace the affected features of the Software without disruption.

(d)   If Contractor directs the State to cease using any Software under **Section 19.3(c)**, the State may terminate this Contract for cause under **Section 16.1**.

(e)   Contractor will have no liability for any claim of infringement arising solely from:

   (i)   Contractor's compliance with any designs, specifications, or instructions of the State; or

   (ii)   Modification of the Software by the State without the prior knowledge and approval of Contractor;

   unless the claim arose against the Software independently of any of the above specified actions.

20. Liquidated Damages.

20.1   The parties agree that any delay or failure by Contractor to timely perform its obligations in accordance with the Implementation Plan and Milestone Dates agreed to by the parties will interfere with the proper and timely implementation of the Software, to the loss and damage of the State. Further, the State will incur major costs to perform the obligations that would have otherwise been performed by Contractor. The parties understand and agree that any liquidated damages Contractor must pay to the State as a result of such nonperformance are described in the Statement of Work, and that these amounts are reasonable estimates of the State's damages in accordance with applicable Law.

20.2   The parties acknowledge and agree that Contractor could incur liquidated damages for more than one event if Contractor fails to timely perform its obligations by each Milestone Date.

20.3   The assessment of liquidated damages will not constitute a waiver or release of any other remedy the State may have under this Contract for Contractor's breach of this Contract, including without limitation, the State's right to terminate this Contract for cause under **Section 16.1**, and the State will be entitled in its discretion to recover actual damages caused by Contractor's failure to perform its obligations under this Contract. However, the State will reduce such actual damages by the amounts of liquidated damages received for the same events causing the actual damages.

20.4   Amounts due the State as liquidated damages may be set off against any Fees payable to Contractor under this Contract, or the State may bill Contractor as a separate item and Contractor will promptly make payments on such bills.

21. Damages Disclaimers and Limitations.

21.1   The State's Disclaimer of Damages. THE STATE WILL NOT BE LIABLE, REGARDLESS OF THE FORM OF ACTION, WHETHER IN CONTRACT, TORT, NEGLIGENCE, STRICT LIABILITY OR BY STATUTE OR OTHERWISE, FOR ANY CLAIM RELATED TO OR ARISING UNDER THIS CONTRACT FOR CONSEQUENTIAL, INCIDENTAL, INDIRECT, OR SPECIAL DAMAGES, INCLUDING WITHOUT LIMITATION LOST PROFITS AND LOST BUSINESS OPPORTUNITIES.

21.2 The State's Limitation of Liability. IN NO EVENT WILL THE STATE'S AGGREGATE LIABILITY TO CONTRACTOR UNDER THIS CONTRACT, REGARDLESS OF THE FORM OF ACTION, WHETHER IN CONTRACT, TORT, NEGLIGENCE, STRICT LIABILITY OR BY STATUTE OR OTHERWISE, FOR ANY CLAIM RELATED TO OR ARISING UNDER THIS CONTRACT, EXCEED THE MAXIMUM AMOUNT OF FEES PAYABLE UNDER THIS CONTRACT.

22. State Data.

22.1 Ownership. The State's data ("**State Data**"), which will be treated by Contractor as Confidential Information, includes: (a) User Data; and (b) any other data collected, used, processed, stored, or generated by the State in connection with the Services, including but not limited to personally identifiable information ("**PII**") collected, used, processed, stored, or generated as the result of the Services, including, without limitation, any information that identifies an individual. State Data is and will remain the sole and exclusive property of the State and all right, title, and interest in the same is reserved by the State. This **Section 22.1** survives termination or expiration of this Contract.

22.2 Contractor Use of State Data. Contractor is provided a limited license to State Data for the sole and exclusive purpose of providing the Services, including a license to collect, process, store, generate, and display State Data only to the extent necessary in the provision of the Services. Contractor must: (a) keep and maintain State Data in strict confidence, using such degree of care as is appropriate and consistent with its obligations as further described in this Contract and applicable law to avoid unauthorized access, use, disclosure, or loss; (b) use and disclose State Data solely and exclusively for the purpose of providing the Services, such use and disclosure being in accordance with this Contract, any applicable Statement of Work, and applicable law; and (c) not use, sell, rent, transfer, distribute, or otherwise disclose or make available State Data for Contractor's own purposes or for the benefit of anyone other than the State without the State's prior written consent. This **Section 22.2** survives termination or expiration of this Contract.

22.3 Loss of Data. In the event of any act, error or omission, negligence, misconduct, or breach by Contractor that compromises or is suspected to compromise the security, confidentiality, or integrity of State Data or the physical, technical, administrative, or organizational safeguards put in place by Contractor that relate to the protection of the security, confidentiality, or integrity of State Data, Contractor must, as applicable: (a) notify the State as soon as practicable but no later than twenty-four (24) hours of becoming aware of such occurrence; (b) cooperate with the State in investigating the occurrence, including making available all relevant records, logs, files, data reporting, and other materials required to comply with applicable law or as otherwise required by the State; (c) in the case of PII, at the State's sole election, (i) notify the affected individuals who comprise the PII as soon as practicable but no later than is required to comply with applicable law, or, in the absence of any legally required notification period, within five (5) calendar days of the occurrence; or (ii) reimburse the State for any costs in notifying the affected individuals; (d) in the case of PII, provide third-party credit and identity monitoring services to each of the affected individuals who comprise the PII for the period required to comply with applicable law, or, in the absence of any legally required monitoring services, for no less than twenty-four (24) months following the date of notification to such individuals; (e) perform or take any other actions required to comply with

applicable law as a result of the occurrence; (f) pay for any costs associated with the occurrence, including but not limited to any costs incurred by the State in investigating and resolving the occurrence, including reasonable attorney's fees associated with such investigation and resolution (g) without limiting Contractor's obligations of indemnification as further described in this Contract, indemnify, defend, and hold harmless the State for any and all claims, including reasonable attorneys' fees, costs, and incidental expenses, which may be suffered by, accrued against, charged to, or recoverable from the State in connection with the occurrence; (h) be responsible for recreating lost State Data in the manner and on the schedule set by the State without charge to the State; and (i) provide to the State a detailed plan within ten (10) calendar days of the occurrence describing the measures Contractor will undertake to prevent a future occurrence. Notification to affected individuals, as described above, must comply with applicable law, be written in plain language, and contain, at a minimum: name and contact information of Contractor's representative; a description of the nature of the loss; a list of the types of data involved; the known or approximate date of the loss; how such loss may affect the affected individual; what steps Contractor has taken to protect the affected individual; what steps the affected individual can take to protect himself or herself; contact information for major credit card reporting agencies; and, information regarding the credit and identity monitoring services to be provided by Contractor. The State will have the option to review and approve any notification sent to affected individuals prior to its delivery. Notification to any other party, including but not limited to public media outlets, must be reviewed and approved by the State in writing prior to its dissemination. The parties agree that any damages relating to a breach of this **Section 22.3** are to be considered direct damages and not consequential damages. This **Section 22.3** survives termination or expiration of this Contract.

23. Confidential Information. Each party acknowledges that it may be exposed to or acquire communication or data of the other party that is confidential in nature and is not intended to be disclosed to third parties. This **Section 23** survives termination or expiration of this Contract.

    23.1 Meaning of Confidential Information. The term "**Confidential Information**" means all information and documentation of a party that: (a) has been marked "confidential" or with words of similar meaning, at the time of disclosure by such party; (b) if disclosed orally or not marked "confidential" or with words of similar meaning, was subsequently summarized in writing by the disclosing party and marked "confidential" or with words of similar meaning; or, (c) should reasonably be recognized as confidential information of the disclosing party. The term "Confidential Information" does not include any information or documentation that was or is: (a) in the possession of the State and subject to disclosure under the Michigan Freedom of Information Act (FOIA); (b) already in the possession of the receiving party without an obligation of confidentiality; (c) developed independently by the receiving party, as demonstrated by the receiving party, without violating the disclosing party's proprietary rights; (d) obtained from a source other than the disclosing party without an obligation of confidentiality; or, (e) publicly available when received, or thereafter became publicly available (other than through any unauthorized disclosure by, through, or on behalf of, the receiving party). Notwithstanding the above, in all cases and for all matters, State Data is deemed to be Confidential Information.

23.2 Obligation of Confidentiality. The parties agree to hold all Confidential Information in strict confidence and not to copy, reproduce, sell, transfer, or otherwise dispose of, give or disclose such Confidential Information to third parties other than employees, agents, or subcontractors of a party who have a need to know in connection with this Contract or to use such Confidential Information for any purposes whatsoever other than the performance of this Contract. The parties agree to advise and require their respective employees, agents, and subcontractors of their obligations to keep all Confidential Information confidential. Disclosure to the Contractor's subcontractor is permissible where: (a) the subcontractor is a Permitted Subcontractor; (b) the disclosure is necessary or otherwise naturally occurs in connection with work that is within the Permitted Subcontractor's responsibilities; and (c) Contractor obligates the Permitted Subcontractor in a written contract to maintain the State's Confidential Information in confidence. At the State's request, any of the Contractor's Representatives may be required to execute a separate agreement to be bound by the provisions of this **Section 23.2**.

23.3 Cooperation to Prevent Disclosure of Confidential Information. Each party must use its best efforts to assist the other party in identifying and preventing any unauthorized use or disclosure of any Confidential Information. Without limiting the foregoing, each party must advise the other party immediately in the event either party learns or has reason to believe that any person who has had access to Confidential Information has violated or intends to violate the terms of this Contract. Each party will cooperate with the other party in seeking injunctive or other equitable relief against any such person.

23.4 Remedies for Breach of Obligation of Confidentiality. Each party acknowledges that breach of its obligation of confidentiality may give rise to irreparable injury to the other party, which damage may be inadequately compensable in the form of monetary damages. Accordingly, a party may seek and obtain injunctive relief against the breach or threatened breach of the foregoing undertakings, in addition to any other legal remedies which may be available, to include, in the case of the State, at the sole election of the State, the immediate termination, without liability to the State, of this Contract or any Statement of Work corresponding to the breach or threatened breach.

23.5 Surrender of Confidential Information upon Termination. Upon termination or expiration of this Contract or a Statement of Work, in whole or in part, each party must, within five (5) Business Days from the date of termination, return to the other party any and all Confidential Information received from the other party, or created or received by a party on behalf of the other party, which are in such party's possession, custody, or control. If Contractor or the State determine that the return of any Confidential Information is not feasible, such party must destroy the Confidential Information and certify the same in writing within five (5) Business Days from the date of termination to the other party.

24. ADA Compliance. The State is required to comply with the Americans with Disabilities Act of 1990 (ADA), and has adopted a formal policy regarding accessibility requirements for websites and software applications. Contractor's Software must comply, where relevant, with level AA of the World Wide Web Consortium (W3C) Web Content Accessibility Guidelines (WCAG) 2.0.

25. Records Maintenance, Inspection, Examination, and Audit.

25.1 Right of Audit. The State or its designee may audit Contractor to verify compliance with this Contract. Contractor must retain, and provide to the State or its designee and the auditor general upon request, all financial and accounting records related to this Contract through the Term of this Contract and for three (3) years after the latter of termination, expiration, or final payment under this Contract or any extension ("**Financial Audit Period**"). If an audit, litigation, or other action involving the records is initiated before the end of the Financial Audit Period, Contractor must retain the records until all issues are resolved.

25.2 Right of Inspection. Within ten (10) calendar days of providing notice, the State and its authorized representatives or designees have the right to enter and inspect Contractor's premises or any other places where Services are being performed, and examine, copy, and audit all records related to this Contract. Contractor must cooperate and provide reasonable assistance. If financial errors are revealed, the amount in error must be reflected as a credit or debit on subsequent invoices until the amount is paid or refunded. Any remaining balance at the end of this Contract must be paid or refunded within forty-five (45) calendar days.

25.3 Application.   This **Section 25** applies to Contractor, any Affiliate, and any Permitted Subcontractor that performs Services in connection with this Contract.

26. Insurance Requirements.

26.1 Contractor must maintain the insurances identified below and is responsible for all deductibles. All required insurance must: (a) protect the State from claims that may arise out of, are alleged to arise out of, or result from Contractor's or a Permitted Subcontractor's performance; (b) be primary and non-contributing to any comparable liability insurance (including self-insurance) carried by the State; and (c) be provided by an company with an A.M. Best rating of "A" or better and a financial size of VII or better.

Insurance Type	Additional Requirements
Commercial General Liability Insurance	
Minimal Limits: $1,000,000 Each Occurrence Limit $1,000,000 Personal & Advertising Injury Limit $2,000,000 General Aggregate Limit $2,000,000 Products/Completed Operations	Contractor must have its policy: (1) endorsed to add "the State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees, and agents" as additional insureds using endorsement CG 20 10 11 85, or both CG 2010 07 04 and CG 2037 07 04.

Insurance Type	Additional Requirements
Deductible Maximum: $50,000 Each Occurrence	
Umbrella or Excess Liability Insurance	
Minimal Limits: $5,000,000 General Aggregate	Contractor must have its policy: (1) endorsed to add "the State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees, and agents" as additional insureds.
Automobile Liability Insurance	
Minimal Limits: $1,000,000 Per Occurrence	
Workers' Compensation Insurance	
Minimal Limits: Coverage according to applicable laws governing work activities.	Waiver of subrogation, except where waiver is prohibited by law.
Employers Liability Insurance	
Minimal Limits: $100,000 Each Accident $100,000 Each Employee by Disease $500,000 Aggregate Disease.	
Privacy & Security Liability (Cyber Liability) Insurance	
Minimal Limits: $1,000,000 Each Occurrence $1,000,000 Annual Aggregate	Contractor must have its policy: (1) endorsed to add "the State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees, and agents" as additional insureds; and (2) cover information security and privacy liability, privacy

Insurance Type	Additional Requirements
	notification costs, regulatory defense and penalties, and website media content liability.
Professional Liability (Errors and Omissions) Insurance	
<u>Minimal Limits:</u> $3,000,000 Each Occurrence $3,000,000 Annual Aggregate <u>Deductible Maximum:</u> $50,000 Per Loss	

26.2 If Contractor's policy contains limits higher than the minimum limits, the State is entitled to coverage to the extent of the higher limits. The minimum limits are not intended, and may not be construed, to limit any liability or indemnity of Contractor to any indemnified party or other persons.

26.3 If any of the required policies provide claims-made coverage, the Contractor must: (a) provide coverage with a retroactive date before the effective date of the contract or the beginning of contract work; (b) maintain coverage and provide evidence of coverage for at least three (3) years after completion of the contract of work; and (c) if coverage is canceled or non-renewed, and not replaced with another claims-made policy form with a retroactive date prior to the contract effective date, the Contractor must purchase extended reporting coverage for a minimum of three (3) years after completion of work.

26.4 Contractor must: (a) provide insurance certificates to the State's Contract Administrator, containing the Contract number, at Contract formation and within twenty (20) calendar days of the expiration date of the applicable policies; (b) require that Permitted Subcontractors maintain the required insurances contained in this Section; (c) notify the State's Contract Administrator within five (5) Business Days if any insurance is cancelled; and (d) waive all rights against the State for damages covered by insurance. Failure to maintain the required insurance does not limit this waiver.

26.5 This **Section 26** is not intended to and is not be construed in any manner as waiving, restricting or limiting the liability of either party for any obligations under this Contract (including any provisions hereof requiring Contractor to indemnify, defend and hold harmless the State)

27. Dispute Resolution.

27.1 Unless otherwise specified in the Statement of Work, the parties will endeavor to resolve any Contract dispute in accordance with **Section 27**. The initiating party will reduce its description of the dispute to writing (including all supporting documentation) and deliver it to the responding party's Project Manager. The responding party's Project Manager must respond in writing within five (5) Business Days. The initiating party has five (5) Business Days to review the response. If after such review resolution cannot be reached, both parties will have an additional five (5) Business Days to negotiate in good faith to resolve the dispute. If the dispute cannot be resolved within a total of fifteen (15) Business Days, the parties must submit the dispute to the parties' Contract Administrators. The parties will continue performing while a dispute is being resolved, unless the dispute precludes performance. A dispute involving payment does not preclude performance.

27.2 Litigation to resolve the dispute will not be instituted until after the dispute has been elevated to the parties' Contract Administrators, and either Contract Administrator concludes that resolution is unlikely, or fails to respond within fifteen (15) Business Days. The parties are not prohibited from instituting formal proceedings: (a) to avoid the expiration of statute of limitations period; (b) to preserve a superior position with respect to creditors; or (c) where a party makes a determination that a temporary restraining order or other injunctive relief is the only adequate remedy.   This **Section 27** does not limit the State's right to terminate this Contract.

28. General Provisions.

28.1 Effect of Contractor Bankruptcy. All rights and licenses granted by Contractor under this Contract are and will be deemed to be rights and licenses to "intellectual property," and all Work Product is and will be deemed to be "embodiments" of "intellectual property," for purposes of, and as such terms are used in and interpreted under, Section 365(n) of the United States Bankruptcy Code (the "**Code**"). If Contractor or its estate becomes subject to any bankruptcy or similar proceeding, the State retains and has the right to fully exercise all rights, licenses, elections, and protections under this Contract, the Code and all other applicable bankruptcy, insolvency, and similar Laws with respect to all Software and other Work Product. Without limiting the generality of the foregoing, Contractor acknowledges and agrees that, if Contractor or its estate shall become subject to any bankruptcy or similar proceeding:

(a)   all rights and licenses granted to the State under this Contract will continue subject to the terms and conditions of this Contract, and will not be affected, even by Contractor's rejection of this Contract; and

(b)   the State will be entitled to a complete duplicate of (or complete access to, as appropriate) all such intellectual property and embodiments of intellectual property comprising or relating to any Software or other Work Product, and the same, if not already in the State's possession, will be promptly delivered to the State, unless Contractor elects to and does in fact continue to perform all of its obligations under this Contract.

28.2 Conflicts and Ethics. Contractor will uphold high ethical standards and is prohibited from: (a) holding or acquiring an interest that would conflict with this Contract; (b) doing anything that creates an

appearance of impropriety with respect to the award or performance of the Contract; (c) attempting to influence or appearing to influence any State employee by the direct or indirect offer of anything of value; or (d) paying or agreeing to pay any person, other than employees and consultants working for Contractor, any consideration contingent upon the award of the Contract. Contractor must immediately notify the State of any violation or potential violation of these standards. This **Section 28.2** applies to Contractor, any Affiliate, and any Permitted Subcontractor that Performs Services in connection with this Contract.

28.3 <u>Compliance with Laws</u>. Contractor and its Representatives must comply with all Laws in connection with this Contract.

28.4 <u>Nondiscrimination</u>. Under the Elliott-Larsen Civil Rights Act, 1976 PA 453, MCL 37.2101, et seq., the Persons with Disabilities Civil Rights Act, 1976 PA 220, MCL 37.1101, et seq., and Executive Directive 2019-09, Vendor and its subcontractors agree not to discriminate against an employee or applicant for employment with respect to hire, tenure, terms, conditions, or privileges of employment, or a matter directly or indirectly related to employment, because of race, color, religion, national origin, age, sex (as defined in Executive Directive 2019-09), height, weight, marital status, partisan considerations,

any mental or physical disability, or genetic information that is unrelated to the person's ability to perform the duties of a particular job or position. Breach of this covenant is a material breach of the Contract.

28.5 <u>Unfair Labor Practice</u>. Under MCL 423.324, the State may void any Contract with a Contractor or Permitted Subcontractor who appears on the Unfair Labor Practice register compiled under MCL 423.322.

28.6 <u>Governing Law</u>. This Contract is governed, construed, and enforced in accordance with Michigan law, excluding choice-of-law principles, and all claims relating to or arising out of this Contract are governed by Michigan law, excluding choice-of-law principles. Any dispute arising from this Contract must be resolved in the Michigan Court of Claims. Complaints against the State must be initiated in Ingham County, Michigan. Contractor waives any objections, such as lack of personal jurisdiction or forum non conveniens. Contractor must appoint agents in Michigan to receive service of process.

28.7 <u>Non-Exclusivity</u>. Nothing contained in this Contract is intended nor is to be construed as creating any requirements contract with Contractor. This Contract does not restrict the State or its agencies from acquiring similar, equal, or like Services from other sources.

28.8 <u>Force Majeure</u>.

(a) <u>Force Majeure Events</u>. Subject to **Subsection (b)** below, neither party will be liable or responsible to the other party, or be deemed to have defaulted under or breached this Contract, for any failure or delay in fulfilling or performing any term hereof, when and to the extent such failure or delay is caused by: acts of God, flood, fire or explosion, war, terrorism, invasion, riot or other civil unrest, embargoes or blockades in effect on or after the date of this Contract, national or regional emergency, or any passage of law or governmental order, rule, regulation or direction, or any action taken by a

governmental or public authority, including imposing an embargo, export or import restriction, quota or other restriction or prohibition (each of the foregoing, a "**Force Majeure**"), in each case provided that: (a) such event is outside the reasonable control of the affected party; (b) the affected party gives prompt written notice to the other party, stating the period of time the occurrence is expected to continue; (c) the affected party uses diligent efforts to end the failure or delay and minimize the effects of such Force Majeure Event.

(b)   State Performance; Termination. In the event of a Force Majeure Event affecting Contractor's performance under this Contract, the State may suspend its performance hereunder until such time as Contractor resumes performance. The State may terminate this Contract by written notice to Contractor if a Force Majeure Event affecting Contractor's performance hereunder continues substantially uninterrupted for a period of five (5) Business Days or more. Unless the State terminates this Contract pursuant to the preceding sentence, any date specifically designated for Contractor's performance under this Contract will automatically be extended for a period up to the duration of the Force Majeure Event.

28.9 Relationship of the Parties. The relationship between the parties is that of independent contractors. Nothing contained in this Contract is to be construed as creating any agency, partnership, joint venture or other form of joint enterprise, employment or fiduciary relationship between the parties, and neither party shall have authority to contract for or bind the other party in any manner whatsoever.

28.10   Media Releases. News releases (including promotional literature and commercial advertisements) pertaining to this Contract or project to which it relates must not be made without the prior written approval of the State, and then only in accordance with the explicit written instructions of the State.

28.11   Notices. All notices, requests, consents, claims, demands, waivers and other communications under this Contract must be in writing and addressed to the parties as follows (or as otherwise specified by a party in a notice given in accordance with this **Section 28.11**):

If to Contractor:	Kunz, Leigh & Associates	
	2164 University Park Drive, Okemos, MI 48864	
	Email:	j.shaulis@kunzleigh.com
	Attention:	Justin Shaulis, KL&A Partner
If to State:	Jarrod Barron	
	525 W. Allegan Street, Lansing, MI 48909	
	Email:	BarronJ1@michigan.gov
	Attention:	Jarrod Barron, Category Specialist

Notices sent in accordance with this **Section 28.11** will be deemed effectively given: (a) when received, if delivered by hand (with written confirmation of receipt); (b) when received, if sent by a nationally recognized overnight courier (receipt requested); (c) on the date sent by email (with confirmation of transmission), if sent during normal business hours of the recipient, and on the next Business Day, if sent after normal business hours of the recipient; or (d) on the fifth (5th) calendar day after the date mailed, by certified or registered mail, return receipt requested, postage prepaid.

28.12   Headings. The headings in this Contract are for reference only and will not affect the interpretation of this Contract.

28.13   Schedules   All Schedules that are referenced herein and attached hereto are hereby incorporated by reference. The following Schedules are attached hereto and incorporated herein:

Schedule A	Statement of Work
Schedule B	Pricing
Schedule C	Maintenance and Support Schedule

28.14   Assignment. Contractor may not assign or otherwise transfer any of its rights, or delegate or otherwise transfer any of its obligations or performance, under this Contract, in each case whether voluntarily, involuntarily, by operation of law or otherwise, without the State's prior written consent. The State has the right to terminate this Contract in its entirety or any Services or Statements of Work hereunder, pursuant to **Section 16.1**, if Contractor delegates or otherwise transfers any of its obligations or performance hereunder, whether voluntarily, involuntarily, by operation of law or otherwise, and no such delegation or other transfer will relieve Contractor of any of such obligations or performance. For purposes of the preceding sentence, and without limiting its generality, any merger, consolidation or reorganization involving Contractor (regardless of whether Contractor is a surviving or disappearing entity) will be deemed to be a transfer of rights, obligations, or performance under this Contract for which the State's prior written consent is required. Any purported assignment, delegation, or transfer in violation of this **Section 28.14** is void.

28.15   No Third-Party Beneficiaries. This Contract is for the sole benefit of the parties and their respective successors and permitted assigns. Nothing in this Contract, express or implied, is intended to or will confer on any other person or entity any legal or equitable right, benefit or remedy of any nature whatsoever under or by reason of this Contract.

28.16   Amendment and Modification; Waiver. No amendment to or modification of this Contract is effective unless it is in writing, identified as an amendment to this Contract and signed by both parties Contract Administrator. Further, certain amendments to this Contract may require State Administrative Board Approval. No waiver by any party of any of the provisions of this Contract will be effective unless explicitly set forth in writing and signed by the party so waiving. Except as otherwise set forth in this

Contract, no failure to exercise, or delay in exercising, any right, remedy, power, or privilege arising from this Contract will operate or be construed as a waiver. Nor will any single or partial exercise of any right, remedy, power or privilege under this Contract preclude the exercise of any other right, remedy, power or privilege.

28.17   Severability. If any term or provision of this Contract is invalid, illegal, or unenforceable in any jurisdiction, such invalidity, illegality or unenforceability will not affect any other term or provision of this Contract or invalidate or render unenforceable such term or provision in any other jurisdiction. Upon such determination that any term or other provision is invalid, illegal, or unenforceable, the parties must negotiate in good faith to modify this Contract so as to effect the original intent of the parties as closely as possible in a mutually acceptable manner in order that the transactions be consummated as originally contemplated to the greatest extent possible.

28.18   Equitable Relief. Each party to this Contract acknowledges and agrees that (a) a breach or threatened breach by such party of any of its obligations under this Contract may give rise to irreparable harm to the other party for which monetary damages would not be an adequate remedy and (b) in the event of a breach or a threatened breach by such party of any such obligations, the other party hereto is, in addition to any and all other rights and remedies that may be available to such party at law, at equity or otherwise in respect of such breach, entitled to equitable relief, including a temporary restraining order, an injunction, specific performance and any other relief that may be available from a court of competent jurisdiction, without any requirement to post a bond or other security, and without any requirement to prove actual damages or that monetary damages will not afford an adequate remedy. Each party to this Contract agrees that such party will not oppose or otherwise challenge the appropriateness of equitable relief or the entry by a court of competent jurisdiction of an order granting equitable relief, in either case, consistent with the terms of this **Section 28.19**.

28.19   Counterparts. This Contract may be executed in counterparts, each of which will be deemed an original, but all of which together will be deemed to be one and the same Contract. A signed copy of this Contract delivered by email or other means of electronic transmission (to which a signed PDF copy is attached) will be deemed to have the same legal effect as delivery of an original signed copy of this Contract.

28.20   Further Assurances. Each party will, upon the reasonable request of the other party, execute such documents and perform such acts as may be necessary to give full effect to the terms of this Contract.

28.21   Entire Agreement. This Contract, together with all Schedules, Exhibits, and the Statement of Work constitutes the sole and entire agreement of the parties to this Contract with respect to the subject matter contained herein, and supersedes all prior and contemporaneous understandings and agreements, representations and warranties, both written and oral, with respect to such subject matter. In the event of any inconsistency between the statements made in the body of this Contract, the Schedules, Exhibits, and the Statement of Work, the following order of precedence governs: (a) first, this Contract, excluding its Exhibits and Schedules, and the Statement of Work; and (b) second, the

Statement of Work as of the Effective Date; and (c) third, the Exhibits and Schedules to this Contract as of the Effective Date. NO TERMS ON CONTRACTORS INVOICES, WEBSITE, BROWSE-WRAP, SHRINK-WRAP, CLICK-WRAP, CLICK-THROUGH OR OTHER NON-NEGOTIATED TERMS AND CONDITIONS PROVIDED WITH ANY OF THE SERVICES, OR DOCUMENTATION HEREUNDER WILL CONSTITUTE A PART OR AMENDMENT OF THIS CONTRACT OR IS BINDING ON THE STATE OR ANY AUTHORIZED USER FOR ANY PURPOSE. ALL SUCH OTHER TERMS AND CONDITIONS HAVE NO FORCE AND EFFECT AND ARE DEEMED REJECTED BY THE STATE AND THE AUTHORIZED USER, EVEN IF ACCESS TO OR USE OF SUCH SERVICE OR DOCUMENTATION REQUIRES AFFIRMATIVE ACCEPTANCE OF SUCH TERMS AND CONDITIONS.

STATE OF MICHIGAN

MDARD MAEAP Verification System

SCHEDULE A
Statement of Work

This Schedule identified the requirements of the Contract.

1. DEFINITIONS
The following terms have the meanings set forth below. All initial capitalized terms that are not defined below will have the respective meanings given to them in Section 1 of the Contract Terms and Conditions. "Solution" means the Custom Software Development solution that the State is seeking under this Contract. This project will be Agile development.

Term	Definition
ALRP	Alternate Low Risk Practice
CAFO	Concentrated Animal Feeding Operations
CAS	Crop A*SYST
CCA	Certified Crop Advisory
CTAI	Conservation Technical Assistance Initiative
EGLE	Department of Environment, Great Lakes and Energy
ESD	Environmental Stewardship Division
FAS	Farmstead A*SYST
FWH	Forest, Wetlands and Habitat
GAAMP	Generally Accepted Agricultural Management Practices
GHAS	Greenhouse A*SYST
HUC	Hydrologic Unit Code
LAS	Livestock A*SYST
MACD	Michigan Association of Conservation Districts
MAEAP	Michigan Agriculture Environmental Assurance Program
MDARD	Michigan Department of Agriculture & Rural Development
Measure	Is a number of taking a measurement/count
Metric	Is a calculation between two measures
MOU	Memo of Understanding

Term	Definition
NGO	Non-Governmental Organization
NRCS	Natural Resources Conservation Service
PII	Personal Identifiable Information
PLSS	Public Land Survey System
RPO	Recovery Point Objective; The point in time in which restored data will represent in the event of a system restoration
RTO	Recovery Time Objective; The time in which the system will be fully available following an unplanned outage
SOM	State of Michigan
WLEB	Western Lake Erie Basin

2. BACKGROUND

The Michigan Agriculture Environmental Assurance Program (MAEAP) is an innovative, proactive program that helps farms of all sizes and all commodities voluntarily prevent or minimize agricultural pollution risks. MAEAP's mission is to develop and implement a proactive environmental assurance program ensuring that Michigan farmers are engaging in cost-effective pollution prevention practices and working to comply with state and federal environmental regulations.

This comprehensive, voluntary, proactive program is designed to reduce farmers' legal and environmental risks through a three-phase process: 1) education; 2) farm-specific risk assessment and practice implementation; and 3) on-farm verification that ensure the farmer has implemented environmentally sound practices. The program's four systems — Farmstead, Cropping, Livestock and the newly developed Forest, Wetlands & Habitats System — each examine different aspects of the farm. After becoming MAEAP verified, a farm can display a MAEAP sign signifying that MAEAP partners recognize the farm is environmentally assured.

With confidentiality guaranteed by law, MAEAP provides a structure under which Michigan farmers can be assured they are effectively following approved MAEAP standards. These standards include inspected practices that are consistent with the identified Right to Farm Generally Accepted Agricultural and Management Practices (GAAMPs). Through MAEAP, farmers show that they are working to comply with state and federal environmental laws specific to each system of the program.

MAEAP was first developed in 1997 by a coalition of farmers, commodity groups, state and federal agencies, and conservation and environmental groups to provide a venue for farmers to become better educated about management options in order to help protect and enhance the quality of natural resources. Partners from these groups are still involved in MAEAP's work, serving on committees and spreading the word to farmers. On March 8, 2011, Governor Rick Snyder signed the first legislation of his new administration, establishing MAEAP in law. Read more about these legislative changes.

Michigan farms have achieved more than 5,000 MAEAP verifications across the state on farms of many different sizes, producing many different crops.

MAEAP technicians conduct approximately 3000 assessments annually.

In support of this program, the related tracking of progress has historically been maintained in various solutions. In an effort to standardize on the maintained data and improve efficiency of the program, efforts were initiated in 2015 to build a custom software solution on the Salesforce platform. Although this forced the overall program data to be identified and standardized, the overall design and approach to the solution has not met the needs of the program, resulting in a costly solution that has impeded functionality,

introduced inefficiencies, and limited the ability to meet required reporting needs. In an attempt to mitigate the shortfalls of the Salesforce based solution, the MAEAP program staff have continued to maintain a stand-alone MS Access database to supplement reporting and tracking needs.

Related items for consideration include the following:

- Public information is available at
    - www.maeap.org
    - www.macd.org/maeap/maeap-home.html
    - https://www.michigan.gov/mdard/0,4610,7-125-1599_25432---,00.html
    - https://www.michigan.gov/mdard/0,4610,7-125-1599_25432-310588--,00.html
- MAEAP is intended to provide education and verification that farms are utilizing practices that are environmentally responsible. Farmers volunteer to participate in the program. The overall process is often a multi-year commitment to include education opportunities for the farmer, relationship development between the technician and farmer, assessments of current and ongoing practices, and ultimately, completion of an improvement action plan and successful verification of ongoing MAEAP required practices. Verified farms are provided program signage and are often eligible for other benefits for continuing approved practices.
- Practices can be associated with commodities (e.g., associated with growing corn) or tied to a location (e.g., associated with a well) and can be both unique to a single system as well as more than one system
- Technicians support lead generation, education, assessment activities, and practice implementation. They are associated with the Conservation Districts and not SOM staff.
- Education offerings support Phase 1 education for the farmers to attend and technician education for the technicians to attend. Technicians are expected to provide at least one field training event for farmers a year. Depending on the size of the event, more than one technician may work together to provide the education event to farmers.
- Provision of and tracking of Phase 1 education for farmers is critical to establishing a farm is at Tier 1.
- Verifiers complete the verification activities and are associated with the State of Michigan.
- Assessment and verification are done by system and a single farm can have one or more systems based on their business (e.g., livestock, farmstead, cropping, etc.). Farms can be considered verified if one or more systems are verified, however, the verification status is associated with the system, not the farm.
- The actual assessments used to support the program are updated annually (the section, risk question and associated practices). These updates impact lead generation and education, as well as ongoing assessment and improvement plan progress.
- Verifications are active for a period of 5 years once obtained, although a farm may re-verify earlier than 5 years in order to synchronize the verification of additional systems (e.g., they may verify year 1 for livestock and then reverify for livestock in year 3 when they verify for farmstead so that both are on the same 5-year renewal).
- Assessments can be completed every 3-5 years (or sooner if requested by the farmer). There are currently 7 assessments (A*SYSTs) that support 4 systems
    - Farm*A*Syst is associated with the Farmstead System
    - Crop*A*Syst (for Field and Vegetable Producers) is associated with the Cropping System
    - Crop*A*Syst (for Nursery Crops and Christmas Tree Producers) is associated with the Cropping System
    - Fruit*A*Syst (for Orchards and Small Fruit) is associated with the Cropping System
    - Greenhouse*A*Syst is associated with the Farmstead **and** Cropping Systems
    - Livestock*A*Syst is associated with the Livestock System
    - Forest, Wetlands & Habitat*A*Syst is associated with the FWH System

- Farms are associated with a physical location and the various attributes of that physical location (boundaries, fields, buildings, acreage, etc.). One or more contacts can be associated with one or more farms (owner, operator, producer, etc.)
- Today, although aerial views are often available for a farm, a farm location is often identified by a site address (if one exists) and a lat./long. The overall program plans to transition to GIS points and polygons for a geospatial representation of the farm and its attributes (individual fields, building outlines, well locations, overall farm boundary, etc.). Polygons are not part of the scope of this project phase but should be considered when establishing the GIS foundation functionality.
- In addition to MACD technicians, CTAI engineers will work with farmers that have contracts with NRCS to implement conservation practices. There are 3 stages to CTAI supported projects to implement the identified practices and financial information is tracked for each of the stages (I&E, Design and Construction). CTAI engineers work with the farmers to develop a stewardship plan for the identification and implementation of the practices. Practices are defined by NRCS and the engineer identifies the specific practice and unit of measure specific to that implementation of the practice.
- The system information forms in use today are both for initial data collection about farm details, as well as to provide data in support of the verification process. The new solution will need a means to collect data for a new farm, add to existing farm data for additional systems on the same farm, and produce pre-populated forms in support of verification.
- External (even if aggregate) reporting cannot include a farm until they are "Tier 1" and have provided approval for their data to be included (Tier 1 makes the data eligible, approval makes it available). Once a farm has obtained Tier 1 for a system, the farm is considered a Tier 1 farm, even if other systems are not yet at Tier 1 for that farm. A farm remains in Tier 1 status as long as one or more systems are at Tier. Once a farm is verified in at least one system its status is verified. In addition, once Tier 1 and/or verification is obtained, the farmer has the option to opt in/out of being included in promotional and reporting information (e.g., include their farm sign photo in marketing materials, etc.).
- In addition to overall forms and letters associated with the operations of the program, much of the reporting of activities and progress is tied to counts and totals associated with related geospatial boundaries (number of farms in the program in county XX, etc.). Comparison of these numbers over time to demonstrate program progress is a critical reporting objective.
- The program has been subject to a high turn-over of technicians (30%). Clear availability of historical information and current activity status is needed to support the transition between technicians.

3. PURPOSE
The State is seeking a State hosted Custom Developed Software solution to support the needs of MAEAP as captured in this Contract. This Contract includes development and implementation.

4. CONTRACT TERM
The contract term is set forth in the preamble of the Contract.

5. SPECIFIC STANDARDS
IT Policies, Standards and Procedures (PSP)
Contractors are advised that the State has methods, policies, standards and procedures that have been developed over the years. Contractors must conform to State IT policies and standards. 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. Contractor must also demonstrate they will maintain and keep up to date on all SOM standards.

Public IT Policies, Standards and Procedures (PSP): https://www.michigan.gov/dtmb/0,5552,7-358-82547_56579_56755---,00.html

Secure Web Application Standard
Contractor's solution must meet the State's Secure Application Development Standards as mandated by the State.

Secure Web Application Development Life Cycle (SADLC)
Contractor is required to meet the States Secure Application Development Life Cycle requirements that include:

Security Accreditation
Contractor is required to complete the State Security Accreditation process for the solution.

Application Scanning

On-Premise solutions
The State may scan the application using its application scanning tools. Contractor must provide the resources, at its sole expense, to complete any analysis remediation and validation required by the results of the scan.

Infrastructure Scanning

On-Premise solutions
The State may scan the application using its infrastructure scanning tools and remediate infrastructure vulnerabilities internally.

Acceptable Use Policy

To the extent that Contractor has access to the State's computer system, Contractor must comply with the State's Acceptable Use Policy, see http://michigan.gov/dtmb/0,4568,7-150-56355_56579_56755---,00.html. All Contractor Personnel will be required, in writing, to agree to the State's Acceptable Use Policy before accessing the State's system. The State reserves the right to terminate Contractor's access to the State's system if a violation occurs.

Look and Feel Standard
All software items provided by the Contractor must adhere to the State of Michigan Application/Site standards which can be found at www.michigan.gov/standards.

Mobile Requirements
The Solution must utilize responsive design practices to ensure the web application is accessible via a mobile device.

The view layer of the solution will be HTML5-compliant, providing user-friendly, responsiveness on any screen size from desktop/laptop, to tablet or mobile devices. The Contractor's User Experience (UX) designer will create design mockups and work with the MDARD MAEAP business users and Contractor's development teams to implement the front end in accordance with eMichigan's look and feel standards.

All system functionality will be mobile responsive.

Supported devices and browsers will include:

- Android;
- iOS;
- Windows;
- Google Chrome;
- Microsoft Edge; and
- Apple Safari

ADA Compliance

The State is required to comply with the Americans with Disabilities Act of 1990 (ADA), and has adopted a formal policy regarding accessibility requirements for websites and software applications. The State is requiring that the Solution, where relevant, to level AA of the World Wide Web Consortium (W3C) Web Content Accessibility Guidelines (WCAG) 2.0. Contractor will consider, where relevant, the W3C's Guidance on Applying WCAG 2.0 to Non-Web Information and Communications Technologies (WCAG2ICT) for non-web software and content. The State may require that Contractor complete a Voluntary Product Accessibility Template for WCAG 2.0 (WCAG 2.0 VPAT) or other comparable document for the proposed Solution.
http://www.michigan.gov/documents/dmb/1650.00_209567_7.pdf?20151026134621

The Contractor development and testing teams will use JAWS screen readers to verify tab order and alternate test descriptions. Other aspects of section 508, such as contrast requirements, are achieved through cascading style sheets (CSS) and development standards.

6. USER TYPE AND CAPACITY

Type of User	Access Type	Total Number of Users	Number of Concurrent Users	Annual Growth
State Employees	Write Access	10	10	0
State Employees	Admin Access	5	5	0
Trusted Third Parties	Write Access	100	50	2%

Contractor must be able to meet the expected number of concurrent Users.

Application Scaling

Scalability will be emphasized during application development through a number of design patterns, such as:

- Client-side applications reduce the server load by making the client (mobile device or desktop) do more of the work. So, more users can operate on a single application server as the client handles more logic and page rendering.

- Restful APIs emphasize stateless design and are a part of enabling a server application to be distributed.

- Developing with proper server-state management constraints, e.g., not allowing session or static variables to be updated, and configuring proper request lifecycle with transaction scope, will allow for distribution of server instances.

Latency Response Time

Contractor must conduct testing throughout development to verify that response times are within desired timeliness constraints. Contractor must also leverage server logs and browser tools to verify load times and track request latency. Using client-side application design offers the user interaction speed of a single-page application (SPA). Application response time will be a focus throughout development.

7. ACCESS CONTROL AND AUDIT

The Solution must integrate with the State's IT Identity and Access Management (IAM) environment as described in the State of Michigan Digital Strategy (http://www.michigan.gov/dtmb/0,5552,7-150-56345_56351_69611-336646--,00.html), which consist of:

1. MILogin/Michigan Identity, Credential, and Access Management (MICAM)
    a. An enterprise single sign-on and identity management solution based on IBM's Identity and Access Management products including, IBM Security Identity Manager (ISIM), IBM Security Access Manager for Web (ISAM), IBM Tivoli Federated Identity Manager (TFIM), IBM Security Access Manager for Mobile (ISAMM), and IBM DataPower, which enables the State to establish, manage, and authenticate user identities for the State's

Information Technology (IT) systems.

2. MILogin Identity Federation
    a. Allows federated single sign-on (SSO) for business partners, as well as citizen-based applications.
3. MILogin Multi Factor Authentication (MFA, based on system data classification requirements)
    a. Required for those applications where data classification is Confidential and Restricted as defined by the 1340.00 Michigan Information Technology Information Security standard (i.e. the proposed solution must comply with PHI, PCI, CJIS, IRS, and other standards).
4. MILogin Identity Proofing Services (based on system data classification requirements)
    a. A system that verifies individual's identities before the State allows access to its IT system. This service is based on "life history" or transaction information aggregated from public and proprietary data sources. A leading credit bureau provides this service.

To integrate with the SOM MILogin solution, the Solution must support HTTP Headers based SSO, or SAML, or OAuth or OpenID interfaces for the SSO purposes.

The solution will check every request for a token provided by MiLogin that exposes the username of the logged in user. That username will be matched against the MAEAP Solution's internal permissions database to determine the level of permissions the user has.

The State can configure MiLogin to support multi-factor authentication via a variety of methods, including text, phone call, or e-mail. Identity Federation is service that can be included by MiLogin and can be configured as part of the MiLogin Setup at no additional cost.

8. DATA RETENTION
Contractor must meet Michigan Agriculture Environmental Assurance Program (MAEAP) capabilities for data retention (storage limitations, duration, etc.).

Solution maintained files contain specific information, forms, and correspondence relating to producers involved in MAEAP. Other information in the files may include any verification related correspondence and certificates. ACT = The time the information form is created until re-verification is completed or until the end of the following fiscal year after verification lapse date. This is not consistent with the MAEAP data retention schedule as of 12/18/19.

Agency Retention – ACT + 1 year
Total Retention – ACT + 25 years

The solution will have a centralized purging process, with configurable values for each program/entity. During the design/phase, the Contractor must work with the business owners to ensure that each table that requires a retention policy is configured and can be easily modified in the future.

9. SECURITY
On-Premise
Contractor is responsible for establishing and maintaining a data privacy and information security program, including physical, technical, administrative, and organizational safeguards, that is designed to: (a) ensure the security and confidentiality of the State Data; (b) protect against any anticipated threats or hazards to the security or integrity of the State Data; (c) protect against unauthorized disclosure, access to, or use of the State Data; (d) ensure the proper disposal of State Data; and (e) ensure that all Contractor personnel comply with all of the foregoing. In no case will the safeguards of Contractor's data privacy and information security program be less stringent than the safeguards used by the State, and Contractor must at all times comply with all applicable State IT policies and standards, which are available at http://www.michigan.gov/dtmb/0,4568,7-150-56355_56579_56755---,00.html.

10. END USER OPERATING ENVIRONMENT
The SOM environment is X86 VMware, IBM Power VM and Oracle VM, with supporting enterprise storage monitoring and management.

The solution must accommodate the latest browser versions (including mobile browsers) as well as some pre-existing browsers. To ensure that users with older browsers are still able to access online services, applications must, at a minimum, display and function correctly in standards-compliant browsers and the state standard browser without the use of special plugins or extensions. The rules used to base the minimum browser requirements include:

• Over 2% of site traffic, measured using Sessions or Visitors (or)
• The current browser identified and approved as the State of Michigan standard

This information can be found at www.michigan.gov/browserstats. Please use the most recent calendar quarter to determine browser statistics. For those browsers with over 2% of site traffic, except Internet Explorer which requires support for at minimum version 11, the current browser version as well as the previous two major versions must be supported.

Contractor must support the current and future State standard environment at no additional cost to the State. Contractor must:
1. meet the optimal technical environment based on the environment choices set forth above.
2. comply any State system access requirements that are necessary for the Contractor to perform its obligations on a timely basis, including but not limited to, physical or remote access to State networks, servers, or individual workstations.
3. comply with the current environment and comply with any future changes to the user environment.
4. support the original environment throughout the term of the contract.
5. communicate changes to its roadmaps.
6. Identify any plug-ins necessary for the proposed Solution to meet the system requirements of this request.
7. comply how customers collaborate with your organization in the decision-making process for upgrades, maintenance, and change control.

The solution will be a combination of a mobile responsive design and the "Progressive Web Application" Standard. The end result is an application. That will work offline, but that can be added to the home screen of a mobile device or laptop without having to go through and "App Store" installation process.

The State will have access to the Contractor's instance of JIRA to review content. Contractor will be responsible to supply the State the content and backlog information as requested by the State.

The MAEAP solution will adhere to the minimally supported browsers below:
• Chrome
• Safari
• IE10+
• Edge
• Firefox

If there are future changes to the State of Michigan's operating environment, those changes must be regression tested against the MAEAP Solution to ensure uninterrupted application functionality.

State System-Access Requirements
Contractor will require limited VPN access and tokens to any state-hosted integration end-points. Contractor will work with the State to set up VPN profiles and will assist in updating the associated enterprise architecture solution assessment (EASA).

Original Environment
Contractor will support MAEAP Solution environment throughout the term of this Contract.

Communication Roadmap Changes
MDARD will be able to prioritize the product backlog and have control over when specific features will

be implemented.

Plug-Ins
No browser pug-ins will be required for the MDARD Solution.

Customer Collaboration
Contractor must use a development methodology that includes State collaboration. Every step including requirements validation and elaboration, through joint application design sessions, sprint planning, sprint demonstrations, user acceptance testing, and training, the Contractor must collaborate with the State.

Enhancement Tracking
Maintenance and feature requests will be tracked in the Contactor ticketing system, JIRA. The Contractor will review each request with the MDARD product owner to determine if impact analysis is warranted. If so, the Contractor will determine the effort, resources, time, and cost of the enhancement request.

11. SOFTWARE
Contractor must comply with the Solution to be provided under this Contract including, but not limited to, a detailed description of the Software (name, type, version, release number, etc.), its functionality, optional add-on modules, Contractor's services and the Solution ability to be rapidly configured or scaled as the State's business or technical demands change. If Contractor is using any open source or third-party products in connection with the Solution the Contractor must identify these as part of this Contract (including identifying any associated cost in **Schedule B - Pricing**).

For third-party products that are part of the overall Solution, Contractor must include any end-user license agreements that will be required to access and use such products.

Contractor will not charge for code that has already been developed for the State or any other client. If Contractor is unable to reuse existing code, knowledge or experience as estimated, there will be no cost impact to the State. Contractor assumes all responsibility for the assumptions we've made regarding leveraging existing code, knowledge and experience.

Contractor must utilize existing functionality from other applications that the Contractor has developed for the State of Michigan to provide time and cost savings.

12. SOLUTION REQUIREMENTS
Contractor must fully comply with each section in this **Schedule A – Statement of Work** and complete the attached **Exhibit 1 - Business Specification Worksheet.**

Contractor must meet the proposed approach to validate each requirement to ensure that the Solution meets the specifications set forth in this Contract.

Contractor must comply with any configuration changes or customization modifications that will need to be made to the Solution to meet the specifications set forth in **Exhibit 1 - Business Specification Worksheet** and where applicable in each section of this Contract.
Configuration is referred to as a change to the Solution that must be completed by the Contractor prior to Go-Live but allows an IT or non-IT end user to maintain or modify thereafter (i.e. no source code or structural data model modifications occurring).

Customization is referred to a modification to the Solution's underlying source code, which must be completed within 12 months of contract award.

All configurations or customizations made during the term of the Contract must be forward-compatible with future releases and be fully supported by the Contractor without additional costs.

The Contractor must use the Scrum framework of the Agile methodology to deliver software after each Sprint. This process requires an iterative approach to requirements validation, this providing the

development team with enough information to work continuously while providing MDARD with the agility to change priorities as the project progresses.

The project will begin with a planning phase called sprint zero in which the team will work with MDARD to confirm/plan a release schedule and preliminary sprint planning that identifies, at a high-level, when specific functionality will be developed and available. This planning will consider MDARD's business priorities, as well as structural dependencies necessary to develop code in the most efficient manner.

The release/sprint schedule will drive the order of the requirements validation and elaboration process. Once the schedule is decided, the business and quality analysts will begin the requirements validation and elaboration process on the highest-priority requirements. The Contractor will continue this process throughout the project. The Contractor will work on a group of selected requirements, generating the detail needed for development activities to commence. The Contractor will continue the process, working on block after block of requirements until all the requirements have been validated and elaborated.

Discovery JADs
The first JADs are discovery sessions in which the Contractor team will work with MDARD business users and other stakeholders to review workflows and map requirements to those workflows to identify gaps and opportunities for automation. The Contractor team begins loading all the business, functional and technical requirements into Jira, the Contractor product backlog, sprint planning and management, and defect tracking tool. Jira provides functionality for:

- Reviewing and approving requirements, epics, and user stories;
- Tracking development and testing activities;
- Tracking defects; and
- Linking all these elements together to provide detailed traceability information.

Functional JADS
Once the Contractor team has validated business, functional, and technical requirements for a block of functionality, they move into functional JADs where the Contractor team works collaboratively with business users to break the requirements down into epics and users stories.

The Contractor will also create screen mockups to facilitate the functional JADs that allow users to see the functional design and provide feedback. Mockups will be updated to reflect feedback and they will be associated with the applicable user stories to provide the developers with a clear vision of the required functionality.

Technical JADs
The Contractor team moves on to technical JADs in which they capture field specifications and acceptance criteria. The acceptance criteria follow the pattern of given, when, then, where:

- *Given* communicates conditions necessary for testing the functionality;
- *When* communicates specific actions the user will take;
- *Then* communicates the expected result of each action.

Acceptance criteria clearly communicate to the development team all the details necessary to build the functionality and they serve as the basis for all testing activities. This approach has yielded high-quality code with very low defect counts.

User Story Review and Approval Process
Contractor will provide identified MDARD stakeholders with access to Jira. The Contractor uses Jira to manage user story review and approval, among other project activities.

As the Contractor team is working through JADs, they will begin adding user stories that will appear in

the Draft column of the project's Story Review Board. Each story contains a link to the applicable business or functional requirement(s).

Once the user story is completed, the authoring Contractor BA will move it to the Internal Review column. Another Contractor BA will peer review the story to verify that it complies with the established best practices, ensuring that it is clear and complete. If there are any issues with the story, the reviewer will work with the authoring Contractor BA to get the issues remedied.

When the user story passes all internal quality checks, the peer reviewer will move it to the Ready for SOM Review column. During an identified review period, an identified MDARD stakeholder will move the story to the In Review column while they are reviewing it. This serves to communicate to all stakeholders the progress of review for each and every story. When they are done reviewing, they will take one of three actions:

- If the MDARD reviewer approves the story and all related artifacts (e.g., mockups, field specifications, business rules, etc.), they will move to the Approved column.
- If the MDARD reviewer wants minor modifications, they will move it to the Approved with Comments column. The authoring Contractor BA will work with the person who made the comments to get the story updated. The revised story will be collaboratively reviewed in a sprint planning session, then moved to the Approved column by the MDARD product owner.
- If the MARD reviewer feels the story misses the mark completely, they will add comments and move the story back to the Draft column. Due to the iterative, collaborative JAD process, the Contractor will provide the mechanism for resolving this situation.

Once the stories are approved, they are officially in the product backlog, ready and waiting to be added to a development sprint

13. INTEGRATION

Contractor must integrate the Solution with the systems listed in the Integration list provided by the State below:

Interface Name	Frequency	Contractor Responsibilities
Public Web Pages – Publishing Approved Phase 1 Sessions	Real time	The MAEAP Solution will expose events with a real-time REST API or a batch interface API. Contractor will use a real-time REST API, which will be exposed via a firewall rule to the State of Michigan network. In the case of the State not being able to consume the REST API, the Contractor will optionally provide a batch file in the State's provided format to be delivered by Secure FTP (SFTP). A batch file format may be easier to consume for legacy systems.
Public Web Pages – Verification Request Form (Technology: Cognito)	Real time	To continue to use the Cognito form, the MAEAP Solution will process the results of the form automatically if the results are available in a machine-readable format. Cognito sends an e-mail that contains the results of the submitted form. The Solution will accept these emails automatically and will use pattern matching technology to detect the contents of the form and to make the association with a farm and technician(s).

MiLogin	With each authentication, daily	The Solution will integrate with MiLogin, using SAML 2.0 authentication or reverse-proxy authentication. Contractor must work with the MiLogin solution team and follow their recommendations based on usage needs. All users will be required to use MILogin to authenticate. After a user logs in initially with MiLogin, the account will be flagged as needing permissions and an authorized system administrator will have the ability to set roles and permission levels.

14. MIGRATION
Contractor must Migrate data into the Solution, data listed in the Migration List provided by the State below:

Application Name	Database Name	Number of Data Fields	Number of Records	Current Database Size	Current Technology
MAEAP Verification Program	MAEAP Verification	650	73K	1170.4 MB	Salesforce
TableName	**Field Name**			**FieldSize FieldTtype**	
AccountContactRole_c	Id			64 type = Text	
AccountContactRole_c	IsDeleted			4 type = Long	
AccountContactRole_c	CreatedDate			8 type = Date	
AccountContactRole_c	CreatedById			64 type = Text	
AccountContactRole_c	LastModifiedDate			8 type = Date	
AccountContactRole_c	LastModifiedById			64 type = Text	
AccountContactRole_c	SystemModstamp			8 type = Date	
AccountContactRole_c	AccountId			64 type = Text	
AccountContactRole_c	ContactId			64 type = Text	
AccountContactRole_c	Role			64 type = Text	
AccountContactRole_c	IsPrimary			1 type = Boolean	
Additional_Farm_Info_c	Id			50 type = Text	
Additional_Farm_Info_c	OwnerId			50 type = Text	
Additional_Farm_Info_c	IsDeleted			4 type = Long	
Additional_Farm_Info_c	Name			16 type = Text	
Additional_Farm_Info_c	RecordTypeId			32 type = Text	
Additional_Farm_Info_c	CreatedDate			8 type = Date	
Additional_Farm_Info_c	CreatedById			32 type = Text	
Additional_Farm_Info_c	LastModifiedDate			8 type = Date	
Additional_Farm_Info_c	LastModifiedById			32 type = Text	
Additional_Farm_Info_c	SystemModstamp			8 type = Date	
Additional_Farm_Info_c	Acres_CNMP__c			4 type = Single	
Additional_Farm_Info_c	Acres_Under_Management__c			4 type = Single	
Additional_Farm_Info_c	Acres_in_Plan__c			4 type = Single	
Additional_Farm_Info_c	Acres_of_Buffer_Filter_Strips__c			4 type = Single	
Additional_Farm_Info_c	Acres_of_Buffered_Wetlands__c			4 type = Single	
Additional_Farm_Info_c	Acres_of_Lowland_Forest__c			4 type = Single	
Additional_Farm_Info_c	Acres_of_Other_Non_Forest_Habitats__c			4 type = Single	

Additional_Farm_Info_c	Acres_of_Restored_Habitat__c	4 type = Single
Additional_Farm_Info_c	Acres_of_Restored_Wetlands__c	4 type = Single
Additional_Farm_Info_c	Acres_of_Riparian_Management_Zones__c	4 type = Single
Additional_Farm_Info_c	Acres_of_Upland_Forest__c	4 type = Single
Additional_Farm_Info_c	Affected_by_Sustainable_Practices__c	4 type = Long
Additional_Farm_Info_c	Allow_MDARD_to_publish_press_release__c	4 type = Long
Additional_Farm_Info_c	Approve_use_of_photo_for_press_release__c	4 type = Long
Additional_Farm_Info_c	Buffer_Strips_linear_feet__c	8 type = Double
Additional_Farm_Info_c	CCA__c	50 type = Text
Additional_Farm_Info_c	CNMP_NMP_acres__c	4 type = Single
Additional_Farm_Info_c	Comments__c	255 type = Text
Additional_Farm_Info_c	Compliance_Info__c	255 type = Text
Additional_Farm_Info_c	Conservation_Tillage_Acres__c	4 type = Single
Additional_Farm_Info_c	Conservation_Tillage__c	4 type = Single
Additional_Farm_Info_c	Cover_Crop_Annual__c	4 type = Single
Additional_Farm_Info_c	Cover_Crop_acres__c	4 type = Single
Additional_Farm_Info_c	Date_Plan_Expires__c	8 type = Date
Additional_Farm_Info_c	Date_Plan_Written__c	8 type = Date
Additional_Farm_Info_c	Duplicate_Checker_text__c	255 type = Text
Additional_Farm_Info_c	EHS_Threshold__c	1 type = Boolean
Additional_Farm_Info_c	Environmental_Info__c	1 type = Boolean
Additional_Farm_Info_c	Extremely_Hazardous_Substances_Stored__c	1 type = Boolean
Additional_Farm_Info_c	Farm__c	50 type = Text
Additional_Farm_Info_c	Farmer_market_directly_to_consumers__c	1 type = Boolean
Additional_Farm_Info_c	Fertilizer_Application_acres__c	4 type = Single
Additional_Farm_Info_c	Fertilizer_Storage_Capacity__c	8 type = Double
Additional_Farm_Info_c	Fertilizer_Storage_gallons__c	8 type = Double
Additional_Farm_Info_c	Fuel_Storage_gallons__c	8 type = Double
Additional_Farm_Info_c	Grade_Stabilization_each__c	4 type = Long
Additional_Farm_Info_c	Greenhouse_Fertilizer_square_feet__c	8 type = Double
Additional_Farm_Info_c	Greenhouse_Irrigation_square_feet__c	8 type = Double
Additional_Farm_Info_c	Greenhouse_Pesticides_square_feet__c	8 type = Double
Additional_Farm_Info_c	Greenhouse_Size_square_feet__c	8 type = Double
Additional_Farm_Info_c	Habitat_for_Species_in_Action_Plan__c	1 type = Boolean
Additional_Farm_Info_c	If_yes_what_commodity_is_provided__c	255 type = Text
Additional_Farm_Info_c	Invasive_Species_acres__c	4 type = Single
Additional_Farm_Info_c	Irrigated__c	4 type = Long
Additional_Farm_Info_c	Irrigation_acres__c	4 type = Single
Additional_Farm_Info_c	Is_there_Evidence_of_Discharge__c	1 type = Boolean
Additional_Farm_Info_c	Livestock_Exclusion_feet__c	8 type = Double
Additional_Farm_Info_c	Livestock_Exclusion_linear_feet__c	8 type = Double
Additional_Farm_Info_c	Locked_Type_of_Verification_Section__c	255 type = Text
Additional_Farm_Info_c	Lowland_Forest_acres__c	4 type = Single
Additional_Farm_Info_c	Manure_Application_acres__c	8 type = Double
Additional_Farm_Info_c	Manure_Application_gallons_year__c	8 type = Double
Additional_Farm_Info_c	Manure_Being_Applied__c	8 type = Double
Additional_Farm_Info_c	Manure_Data_is_Accurate__c	1 type = Boolean
Additional_Farm_Info_c	Manure_Given_Away__c	8 type = Double
Additional_Farm_Info_c	Manure_K_lbs_year__c	8 type = Double
Additional_Farm_Info_c	Manure_N_lbs_year__c	8 type = Double
Additional_Farm_Info_c	Manure_P_lbs_year__c	8 type = Double

Additional_Farm_Info_c	Manure_Produced__c	8 type = Double
Additional_Farm_Info_c	Manure_Produced_gallons_year__c	8 type = Double
Additional_Farm_Info_c	Manure_Sold__c	8 type = Double
Additional_Farm_Info_c	Manure_Sold_gallons_year__c	8 type = Double
Additional_Farm_Info_c	Manure_Transfer_gallons_year__c	8 type = Double
Additional_Farm_Info_c	Milkhouse_Discharge_gallons_year__c	8 type = Double
Additional_Farm_Info_c	Milkhouse_Waste_Discharge_Eliminated__c	1 type = Boolean
Additional_Farm_Info_c	No_Till_Zone_Till_Grass_Cover__c	1 type = Boolean
Additional_Farm_Info_c	No_Till_acres__c	4 type = Single
Additional_Farm_Info_c	NonForest_Habitats_acres__c	4 type = Single
Additional_Farm_Info_c	Open_RTF_Complaint__c	1 type = Boolean
Additional_Farm_Info_c	Pesticide_Storage_Capacity__c	8 type = Double
Additional_Farm_Info_c	Pesticide_Storage_Capacity_gallons__c	8 type = Double
Additional_Farm_Info_c	Pesticide_application_acres__c	8 type = Double
Additional_Farm_Info_c	Plan_Approved_Date__c	8 type = Date
Additional_Farm_Info_c	Plan_Author__c	64 type = Text
Additional_Farm_Info_c	Plan_Reviewed_By__c	64 type = Text
Additional_Farm_Info_c	Pounds_of_K_Available_in_Manure__c	8 type = Double
Additional_Farm_Info_c	Pounds_of_N_Available_in_Manure__c	8 type = Double
Additional_Farm_Info_c	Pounds_of_P_Available_in_Manure__c	8 type = Double
Additional_Farm_Info_c	Production_Area_Greenhouse_Only__c	8 type = Double
Additional_Farm_Info_c	Project_Info__c	32 type = Text
Additional_Farm_Info_c	Receiving_Fertilizer__c	8 type = Double
Additional_Farm_Info_c	Receiving_Manure__c	8 type = Double
Additional_Farm_Info_c	Receiving_Pesticides__c	8 type = Double
Additional_Farm_Info_c	Restored_Habitat_acres__c	8 type = Double
Additional_Farm_Info_c	Riparian_Frontage_feet__c	8 type = Double
Additional_Farm_Info_c	Riparian_Zones_acres__c	8 type = Double
Additional_Farm_Info_c	SWAP_Habitat_acres__c	8 type = Double
Additional_Farm_Info_c	Silage_Feed_Leachate_Runoff_Acres__c	8 type = Double
Additional_Farm_Info_c	Silage_Pad_acres__c	8 type = Double
Additional_Farm_Info_c	Stream_Water_Frontage_on_Property__c	8 type = Double
Additional_Farm_Info_c	Sustainable_Practices_acres__c	8 type = Double
Additional_Farm_Info_c	Total_Acres_of_Wetlands__c	8 type = Double
Additional_Farm_Info_c	Total_Amount_of_Fuel_Stored__c	8 type = Double
Additional_Farm_Info_c	Total_Number_of_Gullies_Stabilized__c	4 type = Long
Additional_Farm_Info_c	Type__c	255 type = Text
Additional_Farm_Info_c	Type_of_Management_Plan__c	64 type = Text
Additional_Farm_Info_c	Type_of_Nutrient_Management_Plan__c	64 type = Text
Additional_Farm_Info_c	Type_of_Record__c	64 type = Text
Additional_Farm_Info_c	Type_of_Verifications__c	64 type = Text
Additional_Farm_Info_c	Upland_Forest_acres__c	8 type = Double
Additional_Farm_Info_c	Verifier_Review_Date__c	8 type = Double
Additional_Farm_Info_c	Wells_Meeting_Distance_Regulations__c	1 type = Boolean
Additional_Farm_Info_c	Wells_each__c	4 type = Long
Additional_Farm_Info_c	Wetlands_Buffered_acres__c	8 type = Double
Additional_Farm_Info_c	Wetlands_Natural_acres__c	8 type = Double
Additional_Farm_Info_c	Wetlands_Restored_acres__c	8 type = Double
Additional_Farm_Info_c	Cropping_Manure_Applied_Gallons_Year__c	8 type = Double
Additional_Farm_Info_c	Cropping_Manure_K_Lbs_Year__c	8 type = Double
Additional_Farm_Info_c	Cropping_Manure_N_Lbs_Year__c	8 type = Double

Additional_Farm_Info_c	Cropping_Manure_P_Lbs_Year__c	8 type = Double
Additional_Farm_Info_c	Cropping_Manure_Purchased_Gallons_Year__c	8 type = Double
Additional_Farm_Info_c	Cropping_NMP_Acres__c	8 type = Double
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Additional_Farm_Info_c	FS_Pesticide_Storage_Capacity_Pounds__c	8 type = Double
Additional_Farm_Info_c	FWH_Acres_Included_In_Land_Mngmnt_Plan_s__c	8 type = Double
Additional_Farm_Info_c	FWH_Date_Plan_Expires__c	8 type = Date
Additional_Farm_Info_c	FWH_Date_Plan_Written__c	8 type = Date
Additional_Farm_Info_c	FWH_Forestland_Acres__c	8 type = Double
Additional_Farm_Info_c	FWH_Grassland_Acres__c	8 type = Double
Additional_Farm_Info_c	FWH_Lngth_of_Streambanks_Shorelines_Fe__c	8 type = Double
Additional_Farm_Info_c	FWH_Managed_as_Buffers_Acres__c	8 type = Double
Additional_Farm_Info_c	FWH_Mngmnt_for_Invasive_Species_Acres__c	8 type = Double
Additional_Farm_Info_c	FWH_Plan_Type__c	64 type = Text
Additional_Farm_Info_c	FWH_Plan_Writer__c	64 type = Text
Additional_Farm_Info_c	FWH_Restord_Imprvd_Wetland_Habitat_Acres__c	8 type = Double
Additional_Farm_Info_c	FWH_Restord_imprvd_NonWetland_Habitat_A__c	8 type = Double
Additional_Farm_Info_c	FWH_Wetland_Acres__c	8 type = Double
Additional_Farm_Info_c	Greenhouse_Annual_CoverCrop_SqrFt__c	8 type = Double
Additional_Farm_Info_c	Greenhouse_Buffer_FltrStrps_LinearFt__c	8 type = Double
Additional_Farm_Info_c	Greenhouse_Conservation_Tillage_SqrFt__c	8 type = Double
Additional_Farm_Info_c	Greenhouse_EHS_Threshold__c	1 type = Boolean
Additional_Farm_Info_c	Greenhouse_Frtilizr_Strge_Cpcty_Pound__c	8 type = Double
Additional_Farm_Info_c	Greenhouse_Frtlzer_Strge_Cpcty_Gallons__c	8 type = Double
Additional_Farm_Info_c	Greenhouse_Fuel_Storage_Gallons__c	8 type = Double
Additional_Farm_Info_c	Greenhouse_Grade_Stabilization_SqrFt__c	8 type = Double
Additional_Farm_Info_c	Greenhouse_Manure_Appln_inNMP_SqrFt__c	8 type = Double
Additional_Farm_Info_c	Greenhouse_NMP_Square_Feet__c	8 type = Double
Additional_Farm_Info_c	Greenhouse_No_Till_Square_Feet__c	8 type = Double
Additional_Farm_Info_c	Greenhouse_Pstcde_Strge_Cpcty_Gallons__c	8 type = Double
Additional_Farm_Info_c	Greenhouse_Pstcide_Stre_Cpcty_Pounds__c	8 type = Double
Additional_Farm_Info_c	Greenhouse_Wells_Each__c	4 type = Long
Additional_Farm_Info_c	Livestock_Buffer_Strips_Linear_Feet__c	4 type = Long
Additional_Farm_Info_c	Livestock_CNMP_Acres__c	4 type = Long
Additional_Farm_Info_c	Livestock_CNMP_Reviewed_By__c	64 type = Text
Additional_Farm_Info_c	Livestock_CNMP_Written_By__c	64 type = Text
Additional_Farm_Info_c	Livestock_Conservation_Tillage_Acres__c	8 type = Double
Additional_Farm_Info_c	Livestock_Cover_Crops_Acres__c	8 type = Double
Additional_Farm_Info_c	Livestock_Date_of_CNMP_Approval__c	8 type = Date
Additional_Farm_Info_c	Livestock_Fertilizer_Application_Acres__c	8 type = Double
Additional_Farm_Info_c	Livestock_Grade_Stabilization_Each__c	4 type = Long
Additional_Farm_Info_c	Livestock_Irrigation_Acres__c	8 type = Double
Additional_Farm_Info_c	Livestock_Manure_Application_Acres__c	8 type = Double
Additional_Farm_Info_c	Livestock_Name_ofFarms_Coverd_InThe_CNMP__c	255 type = Text
Additional_Farm_Info_c	Livestock_No_Till_Acres__c	8 type = Double
Additional_Farm_Info_c	Livestock_Pesticide_Application_Acres__c	8 type = Double

Crop__c	Id	255 type = Text
Crop__c	OwnerId	255 type = Text
Crop__c	IsDeleted	2 type = Integer
Crop__c	Name	255 type = Text
Crop__c	CreatedDate	8 type = Date
Crop__c	CreatedById	255 type = Text
Crop__c	LastModifiedDate	8 type = Date
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Crop__c	SystemModstamp	8 type = Date
Crop__c	Crop_Acres__c	8 type = Double
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Crop__c	Crop_Name__c	255 type = Text
Crop__c	Current_Crop__c	1 type = Boolean
Crop__c	Farm__c	255 type = Text
Crop__c	Historical_Crop__c	255 type = Text
Crop__c	Other_Crop__c	255 type = Text
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Farm_History__c	IsDeleted	255 type = Text
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Farm_History__c	Old_Owner__c	255 type = Text
Farm_History__c	Old_Parent_Farm__c	255 type = Text
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HUC_Code__c	Id	255 type = Text
HUC_Code__c	OwnerId	255 type = Text
HUC_Code__c	IsDeleted	255 type = Text
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HUC_Code__c	CreatedDate	8 type = Date
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HUC_Code__c	LastModifiedDate	8 type = Date
HUC_Code__c	LastModifiedById	255 type = Text
HUC_Code__c	SystemModstamp	8 type = Date
HUC_Code__c	FIPS_Code__c	255 type = Text
HUC_Code__c	HUC_Watershed_Name__c	255 type = Text
HUC_Code__c	Township_Code_ID__c	255 type = Text
HUC_Code__c	Township__c	255 type = Text
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Livestock__c	Livestock_Name__c	255 type = Text
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tblContact	OtherLongitude	255 type = Text
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tblContact	Phase_1_Training_attended_date__c	255 type = Text
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tblContact	Status__c	255 type = Text
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tblFarm__c	IsDeleted	255 type = Text
tblFarm__c	Name	255 type = Text
tblFarm__c	RecordTypeId	255 type = Text
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tblFarm__c	City__c	255 type = Text
tblFarm__c	Conservation_District__c	255 type = Text
tblFarm__c	County__c	255 type = Text
tblFarm__c	Cropping_Field_Crop_Lapsed_Date__c	8 type = Date
tblFarm__c	Cropping_Field_Crop_Letter_Date__c	255 type = Text
tblFarm__c	Cropping_Fruit_Lapse_Date__c	8 type = Date
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tblFarm__c	Cropping_Greenhouse_Lapse_Date__c	8 type = Date
tblFarm__c	Cropping_Greenhouse_Letter_Date__c	8 type = Date
tblFarm__c	Cropping_Nursery_Lapse_Date__c	8 type = Date
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tblFarm__c	Farm_Name_Capitalized__c	255 type = Text
tblFarm__c	Farm_type__c	255 type = Text
tblFarm__c	Farmstead_Greenhouse_Lapse_Date__c	8 type = Date
tblFarm__c	Farmstead_Greenhouse_Letter_Date__c	8 type = Date
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tblFarm__c	Farmstead_Letter_Date__c	8 type = Date
tblFarm__c	Forest_Wetlands_and_Habitat_Lapse_Date__c	8 type = Date
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tblFarm__c	Hydrologic_Unit_Code__c	255 type = Text
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tblFarm__c	Livestock_Lapse_Date__c	8 type = Date
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tblFarm__c	Longitude__c	255 type = Text
tblFarm__c	MAEAP_logo_Use_Agreement_on_File__c	255 type = Text
tblFarm__c	MMPA_Member__c	255 type = Text
tblFarm__c	Mailing_city__c	255 type = Text
tblFarm__c	Member_of_MI_Wine_Grape_Industry__c	255 type = Text
tblFarm__c	Most_Recent_Verified_Date__c	8 type = Date
tblFarm__c	Name_of_Farm_on_Certificate__c	255 type = Text
tblFarm__c	Name_of_Producer_s_on_Certificate__c	255 type = Text
tblFarm__c	Parent_Farm__c	255 type = Text

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tblFarm__c	Political_Township__c	255 type = Text
tblFarm__c	Program_Status__c	255 type = Text
tblFarm__c	Project_Code__c	255 type = Text
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tblFarm__c	Senate_District__c	255 type = Text
tblFarm__c	Share_Data_with_MDARD__c	255 type = Text
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tblFarm__c	Site_Location__Longitude__s	255 type = Text
tblFarm__c	State__c	255 type = Text
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tblFarm__c	Test_Field__c	255 type = Text
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tblFarm__c	Tier_1_Letter_Generated__c	255 type = Text
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tblFarm__c	Approved_Press_Release__c	255 type = Text
tblFarm__c	Farmer_market_directly__c	255 type = Text
tblFarm__c	If_yes_what_commodity_is_provided__c	255 type = Text
tblFarm__c	Quarter__c	255 type = Text
tblFarm__c	Survey_Section__c	255 type = Text
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tblFarm__c	Survey_Tier__c	255 type = Text
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tblFarm_Contact__c	IsDeleted	255 type = Text
tblFarm_Contact__c	Name	255 type = Text
tblFarm_Contact__c	CreatedDate	255 type = Text
tblFarm_Contact__c	CreatedById	255 type = Text
tblFarm_Contact__c	LastModifiedDate	8 type = Date
tblFarm_Contact__c	LastModifiedById	255 type = Text
tblFarm_Contact__c	SystemModstamp	8 type = Date
tblFarm_Contact__c	Farm__c	255 type = Text
tblFarm_Contact__c	Contact__c	255 type = Text
tblFarm_Contact__c	Is_Primary__c	255 type = Text
tblFarm_Contact__c	Role__c	255 type = Text
tblInventory_c	Id	50 type = Text
tblInventory_c	OwnerId	50 type = Text
tblInventory_c	IsDeleted	4 type = Long
tblInventory_c	Name	16 type = Text
tblInventory_c	RecordTypeId	32 type = Text
tblInventory_c	CreatedDate	8 type = Date
tblInventory_c	CreatedById	32 type = Text

tblInventory_c	LastModifiedDate	8 type = Date
tblInventory_c	LastModifiedById	32 type = Text
tblInventory_c	SystemModstamp	8 type = Date
tblInventory_c	LastActivityDate	8 type = Date
tblInventory_c	Duplicate_Checker__c	64 type = Text
tblInventory_c	Farm__c	64 type = Text
tblInventory_c	Number_of_Signs__c	4 type = Long
tblInventory_c	Stock_Category__c	50 type = Text
tblInventory_c	Type_of_Sign__c	50 type = Text
tblInventory_c	Verifier_Name__c	64 type = Text
tblMAEAP_CoverageArea_c	Id	50 type = Text
tblMAEAP_CoverageArea_c	OwnerId	50 type = Text
tblMAEAP_CoverageArea_c	IsDeleted	4 type = Long
tblMAEAP_CoverageArea_c	Name	16 type = Text
tblMAEAP_CoverageArea_c	RecordTypeId	32 type = Text
tblMAEAP_CoverageArea_c	CreatedDate	8 type = Date
tblMAEAP_CoverageArea_c	CreatedById	50 type = Text
tblMAEAP_CoverageArea_c	LastModifiedDate	8 type = Date
tblMAEAP_CoverageArea_c	LastModifiedById	50 type = Text
tblMAEAP_CoverageArea_c	SystemModstamp	8 type = Date
tblMAEAP_CoverageArea_c	County__c	32 type = Text
tblMAEAP_CoverageArea_c	Officer_name__c	50 type = Text
tblMAEAP_CoverageArea_c	PublicGroupID__c	32 type = Text
tblMAEAP_CoverageArea_c	Staff_Type__c	32 type = Text
tblMAEAP_CoverageArea_c	Verifier_Officer_Name__c	50 type = Text
tblNotes	Id	50 type = Text
tblNotes	IsDeleted	4 type = Long
tblNotes	ParentId	32 type = Text
tblNotes	AccountId	32 type = Text
tblNotes	Title	255 type = Text
tblNotes	IsPrivate	4 type = Long
tblNotes	Body	0 type = Memo
tblNotes	OwnerId	50 type = Text
tblNotes	CreatedDate	8 type = Date
tblNotes	CreatedById	50 type = Text
tblNotes	LastModifiedDate	8 type = Date
tblNotes	LastModifiedById	50 type = Text
tblNotes	SystemModstamp	8 type = Date
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tblQuestions	OwnerId	50 type = Text
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tblQuestions	LastModifiedDate	8 type = Date
tblQuestions	LastModifiedById	32 type = Text
tblQuestions	SystemModstamp	8 type = Date
tblQuestions	Assessment_Section	64 type = Text
tblQuestions	Description	255 type = Text
tblQuestions	PRACTICE_CATEGORY	255 type = Text
tblQuestions	PRACTICE_SECTION	255 type = Text

tblQuestions	Practice_Number	4 type = Long
tblQuestions	Question	255 type = Text
tblQuestions	Question_number	16 type = Text
tblQuestions	MAEAP_Verification_Required	1 type = Boolean
tblQuestions	Risk_Reduction_Practice	255 type = Text
tblQuestions	Stewardship_Plan_Practice	255 type = Text
tblQuestions	Type_of_A_Syst	64 type = Text
tblQuestions	Units	32 type = Text
tblQuestions	Version	16 type = Text
tblSkills	Id	50 type = Text
tblSkills	IsDeleted	1 type = Boolean
tblSkills	Name	64 type = Text
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tblSkills	LastModifiedById	32 type = Text
tblSkills	SystemModstamp	8 type = Date
tblSkills	LastActivityDate	8 type = Date
tblSkills	Person_Name__c	32 type = Text
tblSkills	Competence__c	32 type = Text
tblSkills	List_of_Specialization__c	64 type = Text
tblStewardship_Plan__c	Id	255 type = Text
tblStewardship_Plan__c	OwnerId	255 type = Text
tblStewardship_Plan__c	IsDeleted	1 type = Boolean
tblStewardship_Plan__c	Name	255 type = Text
tblStewardship_Plan__c	RecordTypeId	255 type = Text
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tblStewardship_Plan__c	LastModifiedDate	8 type = Date
tblStewardship_Plan__c	LastModifiedById	255 type = Text
tblStewardship_Plan__c	SystemModstamp	8 type = Date
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tblStewardship_Plan__c	A_Syst_Type__c	255 type = Text
tblStewardship_Plan__c	Assessment_Date__c	8 type = Date
tblStewardship_Plan__c	Assessment_Section__c	255 type = Text
tblStewardship_Plan__c	Certified_Date__c	8 type = Date
tblStewardship_Plan__c	Comments__c	255 type = Text
tblStewardship_Plan__c	Completed_Date__c	8 type = Date
tblStewardship_Plan__c	Completion_Date__c	8 type = Date
tblStewardship_Plan__c	Conservation_Practice__c	255 type = Text
tblStewardship_Plan__c	Contract_Item_Number__c	255 type = Text
tblStewardship_Plan__c	Contract_No__c	255 type = Text
tblStewardship_Plan__c	Ending_Risk__c	255 type = Text
tblStewardship_Plan__c	Farm__c	255 type = Text
tblStewardship_Plan__c	Funding_Source__c	255 type = Text
tblStewardship_Plan__c	Implemented_Funds__c	255 type = Text
tblStewardship_Plan__c	Initial_Risk__c	255 type = Text
tblStewardship_Plan__c	NRCS_Assignment_No__c	255 type = Text
tblStewardship_Plan__c	NRCS_Cost_Share__c	255 type = Text
tblStewardship_Plan__c	NRCS_Practice__c	255 type = Text
tblStewardship_Plan__c	NRCS_Unit__c	255 type = Text

tblStewardship_Plan__c	Obligated_Funds__c	255 type = Text
tblStewardship_Plan__c	Planned_Completion_Date__c	8 type = Date
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tblStewardship_Plan__c	Practice_Category__c	255 type = Text
tblStewardship_Plan__c	Practice_Section__c	255 type = Text
tblStewardship_Plan__c	Project_Code__c	255 type = Text
tblStewardship_Plan__c	Proposed_Funds__c	255 type = Text
tblStewardship_Plan__c	Quantity__c	255 type = Text
tblStewardship_Plan__c	Question__c	255 type = Text
tblStewardship_Plan__c	Receipt_of_Service_Code__c	255 type = Text
tblStewardship_Plan__c	Required_for_MAEAP_verification__c	255 type = Text
tblStewardship_Plan__c	Responsibility__c	255 type = Text
tblStewardship_Plan__c	Risk_Category__c	255 type = Text
tblStewardship_Plan__c	Risk_Reduction__c	255 type = Text
tblStewardship_Plan__c	Status__c	255 type = Text
tblStewardship_Plan__c	Tech_Visit_del__c	255 type = Text
tblStewardship_Plan__c	Technician_Provider_Name__c	255 type = Text
tblStewardship_Plan__c	Unit__c	255 type = Text
tblStewardship_Plan__c	Magnitude__c	8 type = Double
tblStewardship_Plan__c	Temp_Number__c	2 type = Integer
tblUsers	Id	50 type = Text
tblUsers	Username	64 type = Text
tblUsers	FirstName	50 type = Text
tblUsers	LastName	50 type = Text
tblUsers	MiddleName	50 type = Text
tblUsers	Suffix	16 type = Text
tblUsers	CompanyName	64 type = Text
tblUsers	Division	64 type = Text
tblUsers	Department	64 type = Text
tblUsers	Title	50 type = Text
tblUsers	Street	128 type = Text
tblUsers	City	64 type = Text
tblUsers	State	32 type = Text
tblUsers	PostalCode	16 type = Text
tblUsers	Country	32 type = Text
tblUsers	StateCode	4 type = Text
tblUsers	CountryCode	16 type = Text
tblUsers	Latitude	8 type = Double
tblUsers	Longitude	8 type = Double
tblUsers	GeocodeAccuracy	32 type = Text
tblUsers	Email	64 type = Text
tblUsers	SenderEmail	64 type = Text
tblUsers	SenderName	64 type = Text
tblUsers	Signature	64 type = Text
tblUsers	StayInTouchSubject	64 type = Text
tblUsers	StayInTouchSignature	64 type = Text
tblUsers	StayInTouchNote	0 type = Memo
tblUsers	Phone	16 type = Text
tblUsers	Fax	16 type = Text
tblUsers	MobilePhone	16 type = Text
tblUsers	Alias	64 type = Text

tblUsers	CommunityNickname	32 type = Text
tblUsers	IsActive	1 type = Boolean
tblUsers	IsSystemControlled	1 type = Boolean
tblUsers	TimeZoneSidKey	50 type = Text
tblUsers	UserRoleId	24 type = Text
tblUsers	LocaleSidKey	16 type = Text
tblUsers	ReceivesInfoEmails	1 type = Boolean
tblUsers	ReceivesAdminInfoEmails	1 type = Boolean
tblUsers	EmailEncodingKey	24 type = Text
tblUsers	ProfileId	24 type = Text
tblUsers	UserType	32 type = Text
tblUsers	UserSubtype	16 type = Text
tblUsers	StartDay	16 type = Text
tblUsers	EndDay	16 type = Text
tblUsers	LanguageLocaleKey	16 type = Text
tblUsers	EmployeeNumber	24 type = Text
tblUsers	DelegatedApproverId	24 type = Text
tblUsers	ManagerId	24 type = Text
tblUsers	LastLoginDate	8 type = Date
tblUsers	LastPasswordChangeDate	8 type = Date
tblUsers	CreatedDate	8 type = Date
tblUsers	CreatedById	32 type = Text
tblUsers	LastModifiedDate	8 type = Date
tblUsers	LastModifiedById	32 type = Text
tblUsers	SystemModstamp	8 type = Date
tblUsers	SuAccessExpirationDate	8 type = Date
tblUsers	SuOrgAdminExpirationDate	8 type = Date
tblUsers	OfflineTrialExpirationDate	8 type = Date
tblUsers	WirelessTrialExpirationDate	8 type = Date
tblUsers	OfflinePdaTrialExpirationDate	8 type = Date
tblUsers	ForecastEnabled	1 type = Boolean
tblUsers	ContactId	32 type = Text
tblUsers	AccountId	32 type = Text
tblUsers	CallCenterId	32 type = Text
tblUsers	Extension	16 type = Text
tblUsers	FederationIdentifier	32 type = Text
tblUsers	AboutMe	255 type = Text
tblUsers	LoginLimit	4 type = Long
tblUsers	ProfilePhotoId	32 type = Text
tblUsers	DigestFrequency	4 type = Text
tblUsers	DefaultGroupNotificationFrequency	4 type = Text
tblUsers	WorkspaceId	32 type = Text
tblUsers	SharingType	32 type = Text
tblUsers	ChatterAdoptionStage	16 type = Text
tblUsers	ChatterAdoptionStageModifiedDate	8 type = Date
tblUsers	BannerPhotoId	32 type = Text
tblUsers	IsProfilePhotoActive	1 type = Boolean
tblUsers	MUSW__Debug__c	1 type = Boolean
tblUsers	MUSW__Mapping_Service_API__c	16 type = Text
tblUsers	MUSW__Mapping_Service_Key__c	16 type = Text
tblUsers	MUSW__Mapping_Service_Name__c	16 type = Text

tblUsers	MUSW__Step_Through__c	1 type = Boolean
tblUsers	MUSW__Successor__c	16 type = Text
tblUsers	MUSW__TempEmail__c	16 type = Text
tblUsers	MUSW__TempPassword__c	16 type = Text
tblUsers	MUSW__isFutureRunning__c	1 type = Boolean
tblUsers	MAEAP_Coverage_Area_County__c	0 type = Memo
tblUsers	MAEAP_District_Manager__c	24 type = Text
tblUsers	MAEAP_Permission_Set__c	24 type = Text
tblUsers	MAEAP_Staff_Type__c	32 type = Text
tblUsers	Not_Applicable__c	1 type = Boolean
Tech_Visit__c	Id	255 type = Text
Tech_Visit__c	OwnerId	255 type = Text
Tech_Visit__c	IsDeleted	2 type = Integer
Tech_Visit__c	Name	255 type = Text
Tech_Visit__c	RecordTypeId	255 type = Text
Tech_Visit__c	CreatedDate	8 type = Date
Tech_Visit__c	CreatedById	255 type = Text
Tech_Visit__c	LastModifiedDate	8 type = Date
Tech_Visit__c	LastModifiedById	255 type = Text
Tech_Visit__c	SystemModstamp	8 type = Date
Tech_Visit__c	LastActivityDate	8 type = Date
Tech_Visit__c	A_Syst_Version__c	255 type = Text
Tech_Visit__c	Actual_Date__c	8 type = Date
Tech_Visit__c	Comments__c	0 type = Memo
Tech_Visit__c	Due_Date__c	8 type = Date
Tech_Visit__c	Farm_Name__c	255 type = Text
Tech_Visit__c	First_Assessment_of_this_type__c	1 type = Boolean
Tech_Visit__c	Most_Recent__c	1 type = Boolean
Tech_Visit__c	Next_Assessment_Due__c	8 type = Date
Tech_Visit__c	No_Action_item__c	1 type = Boolean
Tech_Visit__c	Planned_Date__c	8 type = Date
Tech_Visit__c	Status__c	255 type = Text
Tech_Visit__c	Technician__c	255 type = Text
Tech_Visit__c	Type_of_I_E__c	255 type = Text
Tech_Visit__c	Type_of_Paperwork__c	255 type = Text
Tech_Visit__c	Type_of_Risk_Assessment__c	255 type = Text
Tech_Visit__c	Type_of_visit__c	255 type = Text
Tech_Visit__c	Visit_Date__c	8 type = Date
Tech_Visit__c	Tempnumber__c	255 type = Text
tlkpRecordType	Id	50 type = Text
tlkpRecordType	Name	64 type = Text
tlkpRecordType	ModuleNamespace	64 type = Text
tlkpRecordType	Description	255 type = Text
tlkpRecordType	BusinessProcessId	32 type = Text
tlkpRecordType	SubjectType	32 type = Text
tlkpRecordType	IsActive	1 type = Boolean
tlkpRecordType	CreatedById	32 type = Text
tlkpRecordType	CreatedDate	8 type = Date
tlkpRecordType	LastModifiedById	32 type = Text
tlkpRecordType	LastModifiedDate	8 type = Date
tlkpRecordType	SystemModstamp	8 type = Date

tlkpRecordType	IsDeleted	1 type = Boolean
tlkpTierRange	Id	50 type = Text
tlkpTierRange	OwnerId	24 type = Text
tlkpTierRange	IsDeleted	1 type = Boolean
tlkpTierRange	Name	12 type = Text
tlkpTierRange	CreatedDate	8 type = Date
tlkpTierRange	CreatedById	32 type = Text
tlkpTierRange	LastModifiedDate	8 type = Date
tlkpTierRange	LastModifiedById	32 type = Text
tlkpTierRange	SystemModstamp	8 type = Date
tlkpTierRange	County__c	32 type = Text
tlkpTierRange	County_code__c	4 type = Long
tlkpTierRange	FLP_TR__c	16 type = Text
tlkpTierRange	PTName__c	32 type = Text
tlkpTierRange	PTown_Code__c	4 type = Long
tlkpTierRange	Survey_Tier__c	32 type = Text
tlkpTierRange	TRcode__c	4 type = Long
tlkpTierRange	Tier_Range_TR__c	24 type = Text
Township__c	Id	255 type = Text
Township__c	OwnerId	255 type = Text
Township__c	IsDeleted	255 type = Text
Township__c	Name	255 type = Text
Township__c	CreatedDate	8 type = Date
Township__c	CreatedById	255 type = Text
Township__c	LastModifiedDate	8 type = Date
Township__c	LastModifiedById	255 type = Text
Township__c	SystemModstamp	8 type = Date
Township__c	County__c	255 type = Text
Township__c	External_ID__c	255 type = Text
Township__c	FIPS_Code__c	255 type = Text
Township__c	Parent__c	255 type = Text
Training_Event__c	Id	255 type = Text
Training_Event__c	OwnerId	255 type = Text
Training_Event__c	IsDeleted	2 type = Integer
Training_Event__c	Name	255 type = Text
Training_Event__c	RecordTypeId	255 type = Text
Training_Event__c	CreatedDate	8 type = Date
Training_Event__c	CreatedById	255 type = Text
Training_Event__c	LastModifiedDate	8 type = Date
Training_Event__c	LastModifiedById	255 type = Text
Training_Event__c	SystemModstamp	8 type = Date
Training_Event__c	LastActivityDate	255 type = Text
Training_Event__c	Approval_Date__c	8 type = Date
Training_Event__c	Approved_By__c	255 type = Text
Training_Event__c	Archived__c	1 type = Boolean
Training_Event__c	Building_Farm_Name__c	255 type = Text
Training_Event__c	Building_Room_Number__c	255 type = Text
Training_Event__c	City__c	255 type = Text
Training_Event__c	Comments__c	255 type = Text
Training_Event__c	County__c	255 type = Text
Training_Event__c	Credits__c	255 type = Text

Training_Event__c	Date_Packet_Returned__c	8 type = Date
Training_Event__c	Date_Packet_Sent__c	8 type = Date
Training_Event__c	Date_Signed__c	8 type = Date
Training_Event__c	Date_Viewed__c	8 type = Date
Training_Event__c	Event_Date__c	8 type = Date
Training_Event__c	Event_End_Date__c	8 type = Date
Training_Event__c	Event_End_Time__c	8 type = Date
Training_Event__c	Event_For__c	255 type = Text
Training_Event__c	Event_Name__c	255 type = Text
Training_Event__c	Event_Start_Date__c	8 type = Date
Training_Event__c	Event_Start_Time__c	255 type = Text
Training_Event__c	Event_Start_Time_del__c	8 type = Date
Training_Event__c	Host__c	255 type = Text
Training_Event__c	State__c	255 type = Text
Training_Event__c	Street__c	255 type = Text
Training_Event__c	Title_of_Unit__c	255 type = Text
Training_Event__c	Total_Number_of_Participants__c	255 type = Text
Training_Event__c	Training_Name__c	255 type = Text
Training_Event__c	Type_of_Event__c	255 type = Text
Training_Event__c	Web_Location__c	255 type = Text
Training_Event__c	Zip__c	255 type = Text
Training_Event__c	Number_of_Attendees__c	8 type = Double
Training_Event__c	Participants_Attended__c	8 type = Double
Training_Event__c	Participants_Attended_and_Interested__c	255 type = Text
Training_Event_Junction__c	Id	255 type = Text
Training_Event_Junction__c	IsDeleted	255 type = Text
Training_Event_Junction__c	Name	255 type = Text
Training_Event_Junction__c	RecordTypeId	255 type = Text
Training_Event_Junction__c	CreatedDate	255 type = Text
Training_Event_Junction__c	CreatedById	255 type = Text
Training_Event_Junction__c	LastModifiedDate	255 type = Text
Training_Event_Junction__c	LastModifiedById	255 type = Text
Training_Event_Junction__c	SystemModstamp	255 type = Text
Training_Event_Junction__c	Training_Event__c	255 type = Text
Training_Event_Junction__c	Contact__c	255 type = Text
Training_Event_Junction__c	Attachment_Attached__c	255 type = Text
Training_Event_Junction__c	Date_Attended__c	255 type = Text
Training_Event_Junction__c	Is_Partner__c	255 type = Text
Training_Event_Junction__c	Not_Interested__c	255 type = Text
Training_Event_Junction__c	Status__c	255 type = Text
Training_Event_Junction__c	Training_ID__c	255 type = Text
Verifier_Visit__c	Id	255 type = Text
Verifier_Visit__c	OwnerId	255 type = Text
Verifier_Visit__c	IsDeleted	2 type = Integer
Verifier_Visit__c	Name	255 type = Text
Verifier_Visit__c	CreatedDate	8 type = Date
Verifier_Visit__c	CreatedById	255 type = Text
Verifier_Visit__c	LastModifiedDate	8 type = Date
Verifier_Visit__c	LastModifiedById	255 type = Text
Verifier_Visit__c	SystemModstamp	255 type = Text
Verifier_Visit__c	LastActivityDate	8 type = Date

Verifier_Visit__c	Approved_Photo_of_producer_and_farm__c	1 type = Boolean
Verifier_Visit__c	Approved_Press_Release__c	1 type = Boolean
Verifier_Visit__c	Comments__c	255 type = Text
Verifier_Visit__c	Confirmed_Correct_Logo_Usage__c	255 type = Text
Verifier_Visit__c	DEQ_Contact__c	255 type = Text
Verifier_Visit__c	DEQ_Issues__c	1 type = Boolean
Verifier_Visit__c	Date_Contacted__c	8 type = Date
Verifier_Visit__c	Date_include_in_ad_hoc_letter__c	8 type = Date
Verifier_Visit__c	Expiration_Date__c	8 type = Date
Verifier_Visit__c	Farm_Name__c	255 type = Text
Verifier_Visit__c	Farmer_market_directly__c	1 type = Boolean
Verifier_Visit__c	Forester__c	255 type = Text
Verifier_Visit__c	Free_Sub_sign_s_Received__c	255 type = Text
Verifier_Visit__c	If_yes_what_commodity_is_provided__c	255 type = Text
Verifier_Visit__c	Lapse_Date__c	8 type = Date
Verifier_Visit__c	Letter_Verification_date__c	8 type = Date
Verifier_Visit__c	MAEAP_Verifier__c	255 type = Text
Verifier_Visit__c	Main_Sign_received__c	255 type = Text
Verifier_Visit__c	Most_Recent__c	1 type = Boolean
Verifier_Visit__c	Planned_Date__c	8 type = Date
Verifier_Visit__c	Producer_Contacted_Date__c	8 type = Date
Verifier_Visit__c	Right_to_Farm__c	255 type = Text
Verifier_Visit__c	Status__c	255 type = Text
Verifier_Visit__c	Technician_Name__c	255 type = Text
Verifier_Visit__c	Type_of_Verification__c	255 type = Text
Verifier_Visit__c	Type_of_Verifier_Visit__c	255 type = Text
Verifier_Visit__c	Verification_Date__c	8 type = Date
Verifier_Visit__c	Verification_Officer_Name__c	255 type = Text
Verifier_Visit__c	Verified_CCA__c	255 type = Text
Verifier_Visit__c	Verifier_Visit_Type__c	255 type = Text
Verifier_Visit__c	Visited_Date__c	8 type = Date
Verifier_Visit__c	required_to_generate_warning_letters__c	255 type = Text

Application Name	Database Name	Number of Data Fields	Number of Records	Current Database Size	Current Technology
MAEAP Verification Program	PendingVerifiedList_2015_BackEnd.accdb, PendingVeirifiedList_2015_FrontEnd.accdb	140	5.5K	7 MB	MS Access

Table	Fields	Records
MAEAPStatusList	140	5524
Verifiers	10	5

If ODBC is not available for migration purposes, the Contractor will work with the State for an acceptable alternative which could be a database extract, .xls, flat file, etc. Contractor will work within the constraints of what is available.

Data Migration & Conversion Approach
The MAEAP Solution will map the existing Salesforce and MS Access systems to a new data model designed to maximize reporting efficiency. Contractor must support data correction and data cleansing in collaboration with MDARD, as described in the Data Migration/Conversion Plan that will be produced during sprint zero.

Functional modules that are not currently contained in the data model, but are in scope of the MAEAP Solution project, will be targets of our standard conversion process.

The Contractor's data architects will review data and potentially hold technical JADs with applicable MDARD stakeholders to gain access to the sources described in the Contract and to gather details necessary to complete the Data Migration/Conversion Plan. The plan will describe the field mappings, conversion rules, and data definitions for each necessary transformation.

Next, the Contractor development team will build the conversion programs. To ensure quality, the Contractor team will load and transform staging data and examine the result. Because data will be updated in both production source databases throughout the development process, a daily or weekly process will continuously convert and load new data. The results of this process will be communicated via automated conversion reports. If necessary, the conversion programs will be refined and the entire process repeated until the results are transformed to an acceptable margin of error.

Finally, identified MDARD subject matter experts will review transformed data to provide user acceptance and approval. Then the final data will be loaded into production at the production cutover.

Migration Details
    Salesforce Data
    The bulk of the data to be migrated is currently in the Salesforce database. The conversion team will utilize the Salesforce ODBC driver connection to migrate Salesforce data from a production parity data source to a staging area in the new data model. This direct ODBC approach removes the need for State staff to manually create exports. The staging area will be validated for count parity from the original source as well as data type parity. This staging area will then be migrated to the solution data model as it is made available. When necessary, the data will be normalized or denormalized. This automated migration process will take place throughout the development process as the final data model will be made available when the modules are brought online.

    Microsoft Access Data
    The process will be similar to the Salesforce approach with the caveat of the State providing copies of the Microsoft (MS) Access data on a regular basis. Only the MS Access database that contains data will need to be provided. The data will be loaded to staging tables and then mapped to the appropriate functional data model when available.

15. TESTING SERVICES AND ACCEPTANCE
Contractor must comply with **Section 11. Pre-Delivery Testing and Section 12. Acceptance Testing, of the Custom Software Development Contract Terms**.

Automated Testing
The Contractor will follow DevOps process that incorporates quality and continuous integration into the development process. Unit test coverage of a system creates a foundation for verifying logical refactors or updates of the existing code base, as well as rejecting changesets when new features introduce incompatibility. For the MAEAP Solution, the platform that the Contractor will leverage was developed in C# .NET, with Angular views, so the Contractor will employ Jasmine/Karma for Angular front-end unit tests, and XUnit for C# backend tests.

When a system has sufficient code coverage of unit tests, the DevOps pipeline for the system can then

automatically run the complete test suite to ensure stability and regression of the system's logical units and algorithms. This will improve the overall quality of the system by flagging potential issues and preventing those changesets from getting deployed to an otherwise stable environment.

Unit test suites can be executed at various stages of a DevOps chain, including immediately upon commits of new changes, during the integration phase of all current functionality, at regularly scheduled intervals, and as part of final production builds. Executing at multiple stages ensures code quality is maintained.

Manual Testing
The Contractor will incorporate testing into the process from the very beginning of the software development lifecycle. During requirement validation and elaboration, the Contractor team will work with MDARD stakeholders to develop clear and complete acceptance criteria for each and every user story, which will be reviewed and approved by MDARD stakeholders. The acceptance criteria will drive all testing activities.

As with all other aspects of Scrum, testing is also iterative. The Contractor business and quality analysts will perform functional and system testing for each sprint to ensure each user story functions properly and meets the defined acceptance criteria.

Once the Contractor team has completed testing, the Contractor will facilitate user acceptance testing (UAT) of the functions developed during the sprint. UAT cycles generally begin with a UAT kickoff meeting in which the Contractor test manager will go over the Test Plan with MDARD-identified testers for the sprint cycle, ensuring everyone knows what they are testing, how to record defects, and when the testing cycle is to begin and end. If a UAT tester finds an issue, they will open a defect ticket in Jira and link it to the applicable user story. The ticket will go into the backlog for triage and prioritization.

The Contractor test manager will work with the appropriate MDARD stakeholders several times a week to triage reported UAT defects. This includes:

- Working with the person who reported the issue to gather any additional information necessary to diagnose the problem;
- Comparing the defect to the acceptance criteria to determine if it is in-scope or requires escalation to the change control process;
- Working with the MDARD product owner to set the priority of the ticket, which will drive the resolution timeframe.

In addition to sprint UAT cycles, the Contractor team will facilitate release UAT cycles in which users will test at the epic-level to validate blocks of functionality. This test cycle allows users greater context to determine if the business requirement is satisfied by the group of user stories. For example, during one sprint UAT cycle, a user might test the ability to add a customer contact; in the next UAT cycle, they might test the ability to merge duplicate contact records and so forth. In the release UAT, they would test all aspects of contact management to ensure they can handle all business scenarios with the supplied user interface.

Toward the end of each two-week sprint, the Contractor will demonstrate the new update or updated functionality to identified MDARD stakeholders. Feedback will be mutually evaluated to determine when it should be acted upon. Feedback that expands user story scope may require change control or the addition of a new user story.

At the end of each two-week sprint, after the product demonstration, the sprint code that is developed in the Contractor development environment will be promoted to the sprint UAT environment. While MDARD users are testing a given sprint, the development team will be working on the next sprint. Any issues found during sprint UAT will be documented in Jira tickets and regularly triaged and prioritized for inclusion in a future sprint planning session; for example, sprint 1 issues will typically be fixed in sprint 3. However, high-impact defects, such as those that block other testing activities will be resolved within the current sprint.

After the twelfth (12) sprint is pushed to UAT, the Contractor development team will take 5 days to fix any outstanding defects from sprints 1-11 and build the official UAT release. Defects found in sprint 12 UAT will be fixed during the 15-day, formal UAT cycle in which all functionality is tested for final acceptance. Since all functions developed over the preceding sprints are tested again, this formal user acceptance testing also acts as a regression test, ensuring proper functioning of all code developed over the previous sprints. During this 15-day release UAT cycle, defects are repaired and re-tested immediately. To ensure there is plenty of time to fully validate all functionality after any necessary repairs are made, the schedule will include 5 days for MDARD to approve the UAT. Once UAT is approved for a release, Contractor will work with the State to promote the code to the production environment. The Contractor will work with MDARD to set the specific schedule of events.

The Contractor will work with eMichigan throughout the development cycle to ensure system designs are compliant with the eMichigan look and feel standards and ADA standards. Contractor will work with the State to facilitate eMichigan audit and approval of the release during the 15-day Release UAT cycle.

At the end of UAT, the Contractor test manager will make the necessary updates to the Requirement Traceability Matrix and the Test Closure Report (SEM-0607) for approval and sign-off on test activities.

16. TRAINING SERVICES

The Contractor must provide administration and end-user training for implementation, go-live support, and transition to customer self-sufficiency in support of the following needs:

Training Type (admin, role specific, etc.)	Audience (train the trainer, end-user)	Frequency/Quantity	Number of Participants Per Frequency	Location
System/User Admin	End-user	Implementation and each major release	5	Lansing, MI
CTAI Technician	Train the Trainer	Each major release	5-10	Lansing, MI
CTAI Technician	End-User	Each major release	15	Lower Michigan**
Non-CTAI Technician	Train the Trainer	Each major release	5-10	Lansing area
Non-CTAI Technician	End-User	Each major release	65	Lower Michigan**
Verifier	End-user	Initial and subsequent and each major release	10	Lansing, MI
Report Management/Creation	End-user	Initial and subsequent and each major release	5	Lansing, MI
Query Management/Creation	End-User	Initial and subsequent and each major release	5	Lansing, MI

**State would prefer cost options for holding technician trainings in Lansing, as well as in the northern lower peninsula.*

Contractor must provide user solution and user specific manuals for each training session, the manuals are to be provided digitally with the option for the State to print and distribute as needed/wanted without any additional cost to print or edit the documents. Contractor must provide details and examples of clearly written instructions and documentation to enable State administrators and end-users to successfully operate the Solution without needing to bring in additional Contractor support.

The Contractor will provide a Training Coordinator who will produce the necessary training materials and/or users' guides and who will conduct training sessions after each major release for business users, verifiers, and system administrators, as well as for CTAI technicians and non-CTAI technicians. This will serve to ensure trainees are receiving training just before using the MAEAP Solution, while training topics are fresh in their minds.

The Contractor will conduct train-the-trainer classes. Training will be conducted at State facilities. The trainee will require a State-provided computer on which to conduct training sessions. Class size should be limited to no more than 25 trainees to improve learning outcomes. For larger groups, the Contractor will conduct three sessions, each training up to 25 users.

Training Plan
During sprint zero, the Contractor Project Manager must work with MDARD to develop a Training Plan (SEM-0703) that:

The Contractor must:
- Spell out the scope and objectives of training;
- Identify roles and responsibilities;
- Clarify evaluation practices for determining if learning outcomes are achieved;
- Address training strategy;
- Identify required training resources, locations, and environments;
- Specify who will attend each section of training.

17. HOSTING
On-Premise
The State will be hosting the Solution in its own environment, please refer to **Section 11, Operating Environment**, of this Statement of Work document.

SUPPORT AND OPERATIONS
On-Premise
Contractor must comply with the State's (Optional) **Maintenance and Support** schedule attached as **Schedule C** to the Custom Software Development Terms and Conditions.

During development, maintenance and support will be provided by the Contractor development team, this is not optional.

(Optional) Maintenance and Support include:

- Answering questions regarding system functionality or processes;
- Repairing defects identified during production operations; and
- Resolving production problems resulting from user error that results in data errors.

The Contractor must have a dedicated help desk that triages support calls, ensuring issues are routed to the appropriate personnel and a substantial maintenance team that assumes responsibility for a system once the system is in production.

Basic Elements
The Contractor support process is built around the following assumptions:

- Defects are triaged based on their impact on the customer's operations.
- All production applications will have a published release schedule for correcting system defects. The frequency of the schedule may vary depending on the stability of the system and the interaction with any development activities. Target service levels are:
  - Mature applications (low volume of defect) – quarterly releases
  - New applications (higher volume of defects) – bi-monthly releases
  - Applications within development efforts – releases will be integrated with development releases where possible
- Telephone support will be available 6:00 AM through 6 PM EST, Monday through Saturday, as required by the Contract.
- Online support, through Jira, is available 24 hours per day.
- The Contractor will assign experienced and knowledgeable staff to support operations, including

primary, secondary, and tertiary staff assignments.

Roles and Responsibilities

Issues reported to the help desk will be entered into Jira, Contractor defect tracking and sprint management system. Jira has a web interface that supports access from any location.

Organization Unit	Responsibilities	Tasks
Client User	• Initiate defect • Close defect	• Logs defect • Assists in priority determination • Tests and accepts defect solution
Contractor Help Desk Coordinator	• Initial contact with the client for defect management • Overall defect management	• Works with client to log and triage defect • Monitors service levels for overall maintenance activity
Contractor Support Staff	• Defect analysis, correction, and resolution	• Analyzes the root cause of the defect • Applies change • Performs testing • Moves fix to production
Contractor Project Manager	• Overall defect planning and management for supported application	• Assigns defect to release schedule • Monitors and manages progress • Informs client of progress

Help Desk Process Phases

Phase 1: Planning

At the start of each State fiscal year, the Contractor will establish a release schedule and assign support staff, which is captured in a Maintenance Plan.

The release schedule will be phased based on the number of defects anticipated (based on history, the life cycle of the project, and any accompanying development efforts).

The Contractor planning activities will also involve State of Michigan staff so that State plans for technology upgrades, e.g., server migration, operating system changes, etc., that impact the MAEAP Solution Project can be incorporated and planned into a future release that correlates with the State's upgrade schedule.

MAEAP Solution maintenance will be assigned to specific staff. Staff will be assigned based on the following criteria:

- Primary – has detailed knowledge of the application, the client, and the supporting technology
- Secondary – has knowledge of the application
- Tertiary – has knowledge of the application or the supporting technology

MAEAP Solution maintenance may have multiple candidates for each support level. Support staff may be rotated based on schedule and needs.

The Contractor will provide a maintenance plan at the beginning of each State fiscal year.

Phase Deliverables:
- Annual Maintenance Plan with resources identified

Phase 2: Defect Triage, Logging, and Assignment

Users can call the help desk or enter a defect directly into Jira. If they call the help desk, the help desk coordinator will log the defect. Jira is configured to alert the appropriate personnel when a new ticket is created or when an existing ticket is updated.

Within the contractually allotted times (30 minutes to 2 business days depending upon classification), a qualified maintenance and support resource will review and triage the ticket. The triage process is a disciplined analysis of the problem's impact to determine whether the problem can be part of a scheduled maintenance release or if it requires more immediate attention. Triage may or may not require contacting the end user for additional detail.

Jira will serve as the communication tool between the end user, the support analyst, the maintenance and support manager, and the project manager. Every update to a ticket will generate an email to all appropriate parties. In addition to communication, Jira tracks all information pertaining to the analysis and repair of the defect, including the status of the repair, the time spent on the repair, customer acceptance of the repair, and several other service-level metrics.

Phase Deliverables:
- Defect assigned to support staff or assigned to a release

Phase 3: Defect Close-Out

The final phase of the process involves identifying and developing the solution to the defect, testing the solution, and migrating the defect repair to production. Our maintenance team will test the repair internally, then they will facilitate user acceptance testing (UAT), in which the user who reported the defect will test the repair to confirm it resolved the issue, accepting the release. The maintenance team will also update all supporting MAEAP Solution documentation, if necessary, to reflect the change. Once the support team migrates the repair to production, the reporter of the issue will close the Jira ticket.

Phase Deliverables:
- Tested solution moved to production
- All applicable SEM and end-user documentation updated
- Closed Jira ticket

18. DOCUMENTATION

Contractor must provide as part of the Solution, all user manuals, operating manuals, technical manuals and any other instructions, specifications, documents or materials, in any form or media, that describe the functionality, installation, testing, operation, use, maintenance, support, technical or other components, features or requirements of the Software.

Contractor must develop and submit for State approval complete, accurate, and timely Solution documentation to support all users, and will update any discrepancies, or errors through the life of the contract.

The Contractor's user documentation must provide detailed information about all software features and functionality, enabling the State to resolve common questions and issues prior to initiating formal support requests.

Contractor must provide all documentation necessary for end-users and system administrators, as well as the technical staff who will assume maintenance responsibilities at the end of the contract. Contractor training coordinator will author comprehensive, task-oriented manuals that explain how to use every feature and screen in the application, including system administration and configuration information. The documentation will support training activities and provide users with user-friendly, self-help resources.

The Contractor Training Lead will work with the project stakeholders to develop a documentation approach that best supports MDARD's users.

The Contractor Training Coordinator will update all end-user documents with each sprint to ensure they are always current. The Contractor will also include user review of documentation in each user-acceptance test cycle to ensure each and every feature is documented in a truly useful fashion with accurate and complete information.

The Contractor will follow the SUITE Agile Process Guide, producing and maintaining the necessary SUITE documents throughout the course of the project and the term of the agreement.

19. TRANSITION SERVICES

Upon termination or expiration of the agreement, Contractor must, for a period of time specified by the State (not to exceed 90 calendar days), provide all reasonable transition assistance requested by the State, to allow for the expired or terminated portion of the agreement to continue without interruption or adverse effect, and to facilitate the orderly transfer of the services to the State or its designees. Such transition assistance may include but is not limited to: (a) continuing to perform the services at the established rates; (b) taking all reasonable and necessary measures to transition performance of the work, including all applicable services to the State or the State's designee; (c) taking all necessary and appropriate steps, or such other action as the State may direct, to preserve, maintain, protect, or return (in a format specified by the State) to the State all data stored in the solution and all source code; and (d) preparing an accurate accounting from which the State and Contractor may reconcile all outstanding accounts.

Contractor must comply with the detailed transition-in and transition-out plan as part of this Contract, including any roles or responsibilities expected of the State. The plan must adequately demonstrate the steps to migrate between the Solution and third-party Solutions.

Transition-In Plan

The purpose of the Transition-In Plan is to identify the approach to transition the Contractor into the MAEAP Solution Project, to include staffing, resources, and environments. In addition to the approach, this plan summarizes transition activities and deliverables. Throughout the transition, The Contractor will field feedback from all stakeholders to assess and adjust the approach and its deliverables as needed to ensure full agreement, approval, and support by the State of Michigan. Transition-In will transpire over the first 90 days of the project.

Discovery Sessions

The first day of the MAEAP Solution Project marks the beginning of the Transition-In Phase, also referred to as sprint 0. Contractor will begin holding discovery sessions to walk through the preliminary artifacts included in this proposal, such as the work breakdown structure/schedule, Project Management Plan, Training Plan, etc., as well as to gather all the necessary information to support the creation of a Project Charter.

The Contractor must work with this group of stakeholders to:

- Refine the Preliminary Human Resource Plan, solidifying who will be involved in the project, and what their roles and responsibilities will be;
- Clarify the reporting structure and escalation protocols;
- Discuss any known issues, risks, and mitigation strategies and gain agreement on the format of risk and issue logs;
- Clarify the parameters of status reporting, including the report format, meeting frequency and location, scheduling requirements, and invitees;
- Gain agreement on document deliverable review procedures and define approvers;
- Discuss the proposed testing approach, test types, and SOM responsibilities which will be used to develop the Test Strategy Plan (SEM-0600) and Detailed

> Test Plan (SEM-0603);
- Discuss Organizational Change Management requirements and concerns; and
- Solidify change control procedures.
- Identify resources and/or environments to support the project.

Kickoff Meeting
As early as possible in sprint 0, the Contractor will conduct a project kickoff meeting in which all identified stakeholders will receive key information about the project. Timelines are generally still tentative at the kickoff meeting and will be solidified throughout the rest of sprint 0.

Establishing Environments
During sprint 0, the Contractor technical resources will work with DTMB to:

- Gain approval for any new security planning documents, such as the Enterprise Architecture Security Assessment (EASA) and the System Security Plan (SSP); and
- Secure credentials for any necessary physical or system access.

Requirement Validation
Requirement validation and elaboration will begin during sprint 0 as well. Business, functional, and technical requirements will be validated for accuracy, currency, and completeness, and a high-level release/sprint schedule will be solidified. The release schedule will identify which functionality, will be included in each release. The Contractor business and quality analysts will begin elaborating on the highest-priority requirements, decomposing them into epics and user stories.

Stakeholder Orientation
Contractor uses Jira to:

- Collaboratively build, approve, and manage the product backlog;
- Plan and track sprint work;
- Plan and track test cycles and test result;
- Associates test cases to user stories through epics and all the way back to business and functional requirements for complete traceability;
- Track defects and repairs; and
- Track enhancement requests.

Jira is an intuitive, web-based product that provides all authorized stakeholders with 24x7 access. It also provides all sorts of reports, including sprint burn-down charts that give a real-time, visual of sprint status.

The Contractor team will provide identified State resources with a Jira orientation so that they know how to review and approve user stories, view project and sprint status, execute user acceptance test cases and record defects

Deliverables
During sprint 0, the Contactor team will solidify all the planning deliverables and submit them for review and approval, including:

- Support the State PM in the development of the Project Charter;
- Support the State PM in the development of the Project Management Plan;
- Project Schedule / Work Breakdown Structure;
- SUITE Tailoring Report for Agile Projects
- Requirements Validation and Gap Analysis Report
- Testing documents;
- Training Plan;
- Preliminary SUITE SEM documents

- Security documents; and
- Product backlog.

These deliverables will be reviewed and approved by the State, according to the agreed-upon review process.

Transition-Out Plan

Transition-out activities are significantly different for early termination versus contract expiration because early termination requires transferring development activities to a new party, while transition-out at contract expiration requires transferring only maintenance activities. This section explains our transition-out approach for each of these scenarios.

Early Transition Out

The Contractor must transition remaining project activities to the new entity responsible for contract completion within 90 calendar days for contract completion. Throughout the transition-out, the Contractor must:

- Continue to perform existing services at established rates;
- Take necessary but reasonable measures to transition the performance of work, including all applicable services to the State or the State's designee;
- Take necessary and appropriate steps or such other action as the State may direct to preserve, maintain, protect, or remove all data stored in the solution;
- If requested by the State, return all data stored in the solution in a common format such as text, CSV, or XLS; and
- Prepare an accurate accounting from which the State and KL&A may reconcile outstanding accounts.

An early transition-out period will not exceed 90 days unless otherwise requested by the State.

Normal Transition Out

The MAEAP Solution Project will transition from the development and implementation phase to a warranty phase and then a maintenance and support phase. At the end of the contract, maintenance activities will transition to MDARD and DTMB. This section discusses these transitions.

Transition to Warranty

After the final production release of the MAEAP Solution is approved by the State, the Contractor will complete project closure activities and transition the project to warranty.

Project closure entails submitting final versions of all project deliverables that are iteratively maintained throughout the project, along with a Project Closure Report (PMM-0104). MDARD will review the Project Closure Report, per the agreed-upon Milestone Review Process, which will be documented in the Project Management Plan. If MDARD requests updates, the Contractor will incorporate the provided feedback and resubmit. Once MDARD feedback is incorporated, MDARD will provide project closure approval in writing.

The project will then transition into warranty. The implementation will include 90 calendar days of warranty, at no additional cost to the State, to begin following acceptance of the production implementation of the last release. The warranty phase may be extended depending upon the options the State elects to purchase. The Contractor understands that the State requires the warranty period to encompass September 1 to October 31 for fiscal year-end activities.

All defects identified during the warranty period are required to be fixed before transition to Maintenance & Support.

Transition to Maintenance & Support

Maintenance and support covers:

- Answering questions regarding system functionality or processes;
- Repairing defects identified during production operations; and
- Resolving production problems resulting from user error that create data errors.

End of Contract Transition Out

When transition out occurs after years of maintenance and support, transition-out activities are minimal, because the system is mature and most, if not all, defects will have been repaired. The system users and administrators will have been trained and using the system for years as well, so knowledge transfer requirements are low.

Further, the Contractor's coding best practices support transition out because our code is documented and easily readable. Additionally, the Contractor maintains applicable SUITE documentation to support transition out, including, but not limited to, a:

- Maintenance Plan SEM-0301;
- System Design SEM-0603;
- Software Configuration Management Plan SEM-0302; and
- Defect Tracking Log SEM-0186 (in the form of a product backlog).

As the end of the contract approaches, the Contractor maintenance team manager will submit final versions of these SUITE documents and work with MDARD and DTMB to ensure that the State has all the necessary information to take over maintenance of the system.

Roles and Responsibilities

Transition-in activities focus on planning and preparing for implementation activities to begin. Transition-out activities focus on knowledge transfer and handing off application code and other project deliverables. While these activities have different focuses, the Contractor expects that all project personnel from the Contractor and the State will be involved in both activities, but in different capacities.

20. CONTRACTOR KEY PERSONNEL

Contactor must identify all Contractor resources and responsibilities required for the successful implementation and ongoing support of the Solution.

Contractor Contract Administrator. Contractor must identify the individual appointed by it to (a) administer the terms of this Contract, and (b) approve and execute any Change Notices under this Contract.

Contractor	
Name	Justin Shaulis
Address	2164 University Park Drive
	Okemos, MI 48664
Phone	517-803-3217
Email	j.shaulis@kunzleigh.com

Contractor Project Manager/Scrum Master. Contractor must identify the name of the individual who will serve as the primary contact with regard to services who will have the authority to act on behalf of the Contractor in matters pertaining to the implementation services.

Contractor	

Name	Jason Lantz
Address	2164 University Park Drive
	Okemos, MI 48664
Phone	517-917-0374
Email	j.lantz@kunzleigh.com
Name	Dave Desrochers
Address	2164 University Park Drive
	Okemos, MI 48664
Phone	517-410-4504
Email	d.desrochers@kunzleigh.com

Contractor Business Analyst. Contractor must identify the name of the individual who will be responsible for leading requirements elicitation, documenting requirements (product backlog) and completing analysis for considered changes.

Contractor	
Name	Chris Muschong
Address	2164 University Park Drive
	Okemos, MI 48664
Phone	248-559-7910
Email	c.muschong@michigan.gov

Contractor Technical Lead/Solutions Architect. Contractor must identify name of the individual who will be responsible for the technical oversight and direction for all aspects of the solution and project.

Contractor	
Name	Elizabeth Means
Address	2164 University Park Drive
	Okemos, MI, 48664
Phone	248-559-7910
Email	e.means@kunzleigh.com

Roles and Responsibilities Matrix

Role	Responsibility	Participation Commitment
Contractor Contract Administrator	The Contractor Contract Administrator will be the primary point of contact for contract-related communications. The Contractor Contract Administrator will be responsible for: • Facilitating, documenting and monitoring contractor responsibilities and activities in the fulfillment of contract requirements. • Providing executive oversight to the Contractor team.	• Must attend all meetings related to contract negotiation

| Contractor Project Manager | The Contractor Project Manager must interact with designated personnel from the State to ensure a smooth transition into the project, as well as a smooth transition to the new system. The Project Manager will coordinate all activities of the Contractor personnel assigned to the project and create all reports required by the State. The Contractor Project Manager's responsibilities include at a minimum:
• Managing all defined Contractor responsibilities in the scope of services
• Support the State PM in developing the Project Management Plan and schedule and updating as needed
• Serving as the point person for all project issues
• Coordinating and oversee the day-to-day project activities
• Escalating project issues, project risks, and other concerns
• Reviewing all project deliverables and provide feedback
• Proactively proposing/suggesting options and alternatives for consideration
• Using change control procedures
• Preparing project documents and materials
• Managing the planning process
• Managing overall project schedule and driving multiple releases for the contract
• Facilitating release planning & retrospective
• Owning and assigning action items
• Reporting project status to DTMB Project Manager and MDARD Project Owner
• Assessing and mitigating risks
• Finding and removing roadblocks | • Must attend daily standups
• Must attend sprint planning and sprint demo/retro meetings and be available in a timely manner to answer questions and make decisions
• Must attend Steering Committee, Change Control Board, and Project Leadership meetings
• Must attend JAD and testing sessions |

	• Facilitating communication between roles for every aspect of the project • Keeping release/project information consolidated, organized, and up to date • Driving the cross-functional team at all levels	
Contractor Service Manager	The Contractor Service Manager will be responsible for: • Processing support requests and providing support services • Managing the provision of services as the primary point of contact • Triaging defects during the warranty and maintenance and support phases of the contract • Overseeing defect resolution activities during the warranty and maintenance and support phases of the contract, ensuring services levels are met • Preparing service-level metrics to aid the project manager with status report development during the DDI phase of the project • Working with MDARD business users to analyze stakeholder impact and assist with organizational change management • Facilitating problem resolution • Supporting the team with business analysis and quality assurance activities • Assisting with documentation development	• Must attend daily standups • Must attend sprint planning and sprint demo/retro meetings and be available in a timely manner to answer questions • Attend technical discussions and design sessions • Attend JAD and testing sessions as necessary
Contractor Data Architect	The Contractor Data Architect will be responsible for: • Designing and developing the architecture for the MAEAP Solution's data stores • Providing guidance and standards in support of the overall data architecture to include data analysis, data	• Must attend daily standups • Must attend sprint planning and sprint demo/retro meetings and be available in a timely manner to answer questions

	modeling, data transformation, database performance, data mapping and as applicable, quality assurance of the maintained data. • Migrating, consolidating and cleansing data • Analyzing data for optimization and efficiency • Conducting data retention analysis and/or services	• Must attend technical discussions and design sessions • Must attend JAD and testing sessions
Contractor Database Administrator	The Contractor database architect will be responsible for: • The day-to-day administration of the datasets and databases that support the MAEAP Solution • Performing data quality reviews • Optimizing the database • Executing database maintenance	
Contractor Security Officer	The Contractor Security Officer will be responsible for the overall security of system data, responsible for: • Working with the team to ensure all architecture and designs adhere to data security best practices • Ensuring all DTMB, MCS and SUITE security assessments and documentation are completed • Designing and developing web services for secure data sharing • Performing data security risk assessments and develop mitigation strategies • Performing any necessary scans and penetration testing to ensure data security	• Must attend daily standups • Must attend sprint planning and sprint demo/retro meetings and be available in a timely manner to answer questions • Must attend technical discussions and design sessions • Attend JAD and testing sessions as necessary
Contractor Technical Lead/Solution Architect	The Contractor Technical Lead/Solution Architect will be responsible for technical oversight and direction for all aspects of the solution and project, including: • Leading cross-functional teams of subject matter experts, developers, and business analyst and will facilitate workgroup meetings. • Leading and/or consulting on the development of the system	• Must attend daily standups • Must attend sprint planning and sprint demo/retro meetings and be available in a timely manner to answer questions • Must attend Change Control Board and Project Leadership meetings

	architecture and working closely with the DTMB architect to ensure the MAEAP Solution satisfies requirements and will function as designed. • Responsible for development of test plans and test cases for Unit Testing, Sprint Testing and Performance Testing. • Responsible for execution of all unit, system and vendor testing.	• Attend technical discussions and design sessions • Attend JAD and testing sessions as necessary
Contractor Lead Developer	The Contractor Lead Developer will serve as the primary developer working in conjunction with the system architect and data architect. The Contactor Lead Developer will be responsible for: • Providing direction to the overall development team • Ensuring best development practices and standards are being followed	• Must attend daily standups • Must attend sprint planning and sprint demo/retro meetings and be available in a timely manner to answer questions • Attend technical discussions and design sessions • Attend technical discussions and design sessions • Attend JAD and testing sessions as necessary
Contractor Software Engineers	The Contractor Software Engineers will responsible for the construction, implementation, and unit testing of the new solution.	• Must attend or call-in to daily standups • Must attend sprint planning and sprint demo/retro meetings and be available in a timely manner to answer questions • Attend technical discussions and design sessions as necessary • Attend JAD and testing sessions as necessary
Contractor GIS Specialist	The Contractor GIS Specialist will be responsible for designing and developing GIS-related functionality including integration with ESRI ArcGIS.	• Must attend or call-in to daily standups • Must attend sprint planning and sprint demo/retro meetings and be available in a timely manner to answer questions • Attend technical discussions and design sessions as necessary

		• Attend JAD and testing sessions as necessary
Contractor Training Coordinator	The Contractor Training Coordinator will be responsible for developing training materials and conducting training sessions.	• Must attend or call-in to daily standups • Must attend sprint planning and sprint demo/retro meetings and be available in a timely manner to answer questions • Attend technical discussions and design sessions as necessary • Attend JAD and testing sessions as necessary • Conduct training sessions

21. CONTRACTOR PERSONNEL REQUIREMENTS

Contractor must present certifications evidencing satisfactory Michigan State Police Background checks ICHAT 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.

22. STATE RESOURCES/RESPONSIBILITIES

The State will provide the following resources as part of the implementation and ongoing support of the Solution.

State Contract Administrator. The State Contract Administrator is the individual appointed by the State to (a) administer the terms of this Contract, and (b) approve and execute any Change Notices under this Contract.

State Project Manager. The State Project Manager will serve as the primary contact with regard to implementation Services and overall management of the engagement.

Agency Business Owner (Product Owner). The Agency Business Owner will serve as the primary contact for the business area with regard to business advisement who will have the authority to act on behalf of the State in matters pertaining to the business Specifications.

State Technical Owner. The State Technical Owner will serve as the primary contact with regard to implementation technical advisement and who will have the authority to act on behalf of the State in approving invoices and related deliverables/milestones.

State Test Coordinator. The State Test Coordinator will be responsible for providing acceptance criteria for user stories, development of test plans and test cases for State QA and State UAT and involve the use of other SOM QA resources as needed. The State Test/Technical Owner will attend daily standup meetings, sprint planning and sprint demo/retro meetings, technical discussion, design sessions and be available in a timely manner to answer questions. Contractor will provide any needed training, licenses and access for tools supporting this role.

Role	Name	Title
State Contract Administrator	Jarrod Barron	IT Category Specialist

State Project/Service Manager	Andrew Fralick	Project Manager
Agency Business Owner	Joe Kelpinski	MDARD MAEAP Manager
State Technical Lead	Laura Brancheau	DTMB Manager
State Test Coordinator	Jeanette Clark	Business Analyst

23. MEETINGS

The Contractor must attend the following meetings at no additional cost to the State.

At start of the engagement, the Contractor Project Manager must facilitate a project kick off meeting with the support from the State's Project Manager and the identified State resources to review the approach to accomplishing the project, schedule tasks and identify related timing, and identify any risks or issues related to the planned approach. From project kick-off until final acceptance and go-live, Contractor Project Manager must facilitate weekly meetings (or more if determined necessary by the parties) to provide updates on implementation progress. Following go-live, Contractor must facilitate monthly meetings (or more or less if determined necessary by the parties) to ensure ongoing support success.

If Contractor has an alternative planned approach for project meetings provide details, including purpose, roles and responsibilities, and proposed frequency.

Meeting Types	Purpose	Frequency	Attendees
Kickoff meeting	To bring together project stakeholders to review and agree upon approach, work breakdown structure, schedule, milestone, deliverables, known risks and issues, mitigation strategies, escalation protocols, change control processes, and formats and frequency for various reports and communications.	Once at the beginning of the project	Stakeholders to be identified in Contract.
Joint application design sessions (JADs)	To bring together applicable stakeholders for validating and elaborating requirements and collaboratively designing the user interface. JADs are scheduled as needed.	As needed, throughout the project	Stakeholders to be identified during contract negotiation and/or kickoff meeting
Sprint planning sessions	To collaboratively plan the work that will be completed in the sprint. Work is pulled off the top of the prioritized Product Backlog.	Once per sprint	Contractor development team and MDARD product owner
Sprint review/demo sessions	To demonstrate new functionality developed in the sprint, gaining MDARD feedback before the functionality is migrated to the QA or testing environment.	Once per sprint	Contractor development team and identified MDARD stakeholders
Daily Scrums	For each team member to report what they did yesterday, what they are doing today, and any impediments they are experiencing. This serves	Daily	Contractor development team

	forward momentum and fast resolution of impediments.		
Sprint retrospectives	To discuss what went well and what did not go well. The team collaboratively decides on action plans to correct or avoid identified problems and sets norms based on previous action plans that were effective. This continuous reflection improves team cohesiveness and velocity.	End of each sprint	Contractor development team
UAT kickoff sessions	To clarify what is being tested and by whom and to answer any questions UAT testers may have.	Prior to each sprint UAT cycle and to release UAT	Contractor test manager & identified MDARD UAT testers
Defect triage sessions	To review defects reported during UAT or production use for verifying impact, categorizing defect classification, and prioritizing their position in the product backlog per the MDARD product owner's wishes.	Several times per week during UAT cycles	Contractor test manager and MDARD product owner
Weekly status meetings	To be included with optional Maintenance and Support: • Maintenance release planning and the defects to be included in the next scheduled maintenance releases; • Completed defects since the last meeting; • Progress of any new development contracted during the maintenance period; and • Services levels for compliance with Service Level Agreement.	Monthly after go-live	Contractor Project Manager and identified MDARD and DTMB stakeholders
Ad hoc meetings	To discuss any issue requiring collaboration between one or more parties.	As needed	Contractor Project Manager and applicable parties from MDARD or DTMB

The Contractor will include a comprehensive Communication Plan in the Project Management Plan

deliverable that identifies when, where, and who is to participate in each type of meeting.

24. PROJECT REPORTS
Once the Project Kick-Off meeting has occurred, the Contractor Project Manager will monitor project implementation progress and report on a weekly basis to the State's Project Manager the following:
- Progress to complete milestones, comparing forecasted completion dates to planned and actual completion dates
- Accomplishments during the reporting period
- Tasks planned for the next reporting period
- Identify any existing issues which are impacting the project and the steps being taken to address those issues
- Identify any new risks and describe progress in mitigating high impact/high probability risks previously identified

In addition, the Service Manager will monitor ongoing services and report monthly to the State's Project Manager the content defined on the Contractor Update report per **Section 2.9** of **Schedule C – Maintenance and Support (optional).**

Weekly status meetings will transpire in which the Contractor Project Manager will report the following:

- Progress to complete milestones, comparing forecasted completion dates to planned and actual completion dates
- Accomplishments during the reporting period
- Tasks planned for the next reporting period
- Existing issues that are impacting the project and the steps being taken to address those issues
- New risks and progress in mitigating high impact/high probability risks previously identified

Weekly status reports are required from start of the project through the resolution of warranty defects. The Contractor PM will develop the weekly status report based on metric data tracked in the following applications (access to these applications does not take the place of the weekly status report):

- Microsoft Project – The Contractor uses Microsoft Project to track actual milestone delivery against planned timelines.
- Jira – the Contractor uses Jira to track the product backlog, sprint progress, team velocity, test cycle progress, application defects and resolutions, and enhancement requests. It provides all the metrics necessary for verifying that the Contractor is meeting the required service levels. Please note that in addition to status reports, project stakeholders can log into Jira any time of the day or night to see any of this information.
- Risk and issue tracking logs – the Contractor uses an internal Project Portfolio Management (PPM) tool for tracking risks/mitigation strategies and project issues/resolutions and we will work with the DTMB project manager to ensure that risks and issues are also entered into the State's PPM tool. This system provides all the necessary metrics for reporting project performance and adherence to quality assurance practices.

(Optional) During the maintenance and operations, status reports specific to maintenance and operations activities will be monthly and include the progress and contents of maintenance releases, planning for upcoming releases, and service-level metrics such as the timeliness of defect resolution and defect counts by classification. All this information will come from Jira.

The format of each report type will be reviewed at the kickoff meeting to gain MDARD and DTMB approval and will be used throughout the duration of the project. The Contractor PM will ensure that the reporting requirements are captured in the Project Management Plan deliverable.

25. MILESTONES AND DELIVERABLES
Contractor Milestones and Deliverables are referenced in **Schedule B – Pricing.**

State requires that warranty covers September 1 to October 31 for fiscal year-end activities. If the schedule does fall so that the 90-day warranty covers that time of year, the State requires the Contractor to provide optional pricing for extending warranty in **Schedule B - Pricing**. 90-day warranty starts after the final release.

The Contractor Project Manager will be responsible for maintaining an MS Project schedule (or approved alternative) identifying tasks, durations, forecasted dates and resources – both Contractor and State - required to meet the timeframes as agreed to by both parties.

Changes to scope, schedule or cost must be addressed through a formal change request process with the State and the Contractor to ensure understanding, agreement and approval of authorized parties to the change and clearly identify the impact to the overall project.

SUITE Documentation
In managing its obligation to meet the above milestones and deliverables, the Contractor is required to utilize the applicable State Unified Information Technology Environment (SUITE) methodologies.

SUITE's primary goal is the delivery of on-time, on-budget, quality systems that meet customer expectations. SUITE is based on industry best practices, including those identified in the Project Management Institute's PMBoK and the Capability Maturity Model Integration for Development. It was designed and implemented to standardize methodologies, processes, procedures, training, and tools for project management and systems development lifecycle management. It offers guidance for efficient, effective improvement across multiple process disciplines in the organization, improvements to best practices incorporated from earlier models, and a common, integrated vision of improvement for all project and system related elements.

While applying the SUITE framework through its methodologies is required, SUITE was not designed to add layers of complexity to project execution. There should be no additional costs from the Contractor, since it is expected that they are already following industry best practices which are at least similar to those that form SUITE's foundation.

SUITE's companion templates are used to document project progress or deliverables. In some cases, Contractor may have in place their own set of templates for similar use. Because SUITE can be tailored to fit specific projects, project teams and State project managers may decide to use the Contractor's provided templates, as long as they demonstrate fulfillment of the SUITE methodologies.

The Contractor is required to review http://www.michigan.gov/suite and demonstrate how each PMM/SEM requirement will be met. Contractor wishing to use their own documents must submit an example of the document that will be substituted. The State reserves the right to give final approval of substituted documents and items marked as non-applicable.

26. PRICING
Contractor must comply with **Schedule B - Pricing** a detailed description of all costs associated with implementing, maintaining and supporting the Solution, including all requested services set forth in this Contract.

If Contractor reduces its prices for any of the software or services during the term of this Contract, the State must have the immediate benefit of such lower prices for new purchases. Contractor must send notice to the State's Contract Administrator with the reduced prices within fifteen (15) Business Days of the reduction taking effect.

Travel and Expenses
The State does not pay for overtime or travel expenses.

27. ADDITONAL INFORMATION
The State reserves the right to purchase any additional services or products from the Contractor during the duration of the Contract.

EXHIBIT 1
Business Specification Worksheet

REQUIREMENT ROLES

The following table lists the user roles referenced in the requirements. A single person may be assigned multiple roles and a role may be assigned to more than one person. These roles are for reference in reading the requirements only and not intended to the exact user roles supported by the solution.

Role	Description
Authorized User	An authorized user is a user that based on assigned roles has access to one or more functional areas and associated data in the system. This represents roles such as the technician, verifier and program management. Depending on the role, this person will either be a State of Michigan employee, Conservation District employee or 3rd party partner.
Authorized System Administrator	An authorized system administrator is responsible for the administrative roles associated with the maintenance and support of the system to include managing users, roles, and system configurable values. This will be a State of Michigan employee.
Forms Administrator	The forms administrator is responsible for the creation and maintenance of MS Word templates used for the system generation of forms and letters. This will be a State of Michigan employee.
Query Administrator	The query administrator is responsible for the creation and maintenance of the ad hoc queries. This will be a State of Michigan employee.

A	B	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	D
Business Specification Number	**Business Specification**						**Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
REQUIRED							
Global							
4.0	The solution must allow an authorized user to save work in progress (e.g., save an in-progress assessment and return to it at a later time/session).			✓			The MAEAP Solution will allow users to save work in progress and resume work at a later time/session. Mandatory fields and business rules may require certain information be completed in order to save some records.
5.0	The solution must allow an authorized user to view related records when working with an entity (e.g., view related notes about a farm when viewing a farm, view related system assessments when viewing a farm, view attended Phase 1 education events when viewing a farm, etc.).			✓			User permission will determine what related data a user can access and view. If a user has the appropriate permissions, they will be able to navigate to all related data from the farm record. Upon review of specific functional reuse, KL&A will reuse existing user/group/role code to meet requirements 32.0, 32.1 and 32.2 which detail the requirements for system permissions.

A	B	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	D
Business Specification Number	**Business Specification**						**Contractor must comply with how they will deliver the business Specification. Contractor must meet details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
Technical							

	A	B			C			D
	Business Specification Number	**Business Specification**	**Current Capability**	**Requires Configuration**	**Customization to Software**	**Future Enhancement**	**Not Available**	**Contractor must comply with how they will deliver the business Specification. Contractor must meet details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
	6.0	The solution must support an expected annual 10% increase in the number of systems associated with farms.			✓			The MAEAP Solution will not be performance bound by database table size unless farm counts reach millions of farms. It will be able to handle an annual increase in excess of 10% of the number of systems associated with farms.
	7.0	The solution must support an average of 3000 assessments in a given year (1800 initial and 1200 reassessments).			✓			The MAEAP Solution will support tens of thousands of assessments per year including initial and reassessments.
	8.0	The solution must manage mailing address data to comply with the MDARD Communications Style Guide.			✓			The MAEAP Solution will provide a user interface for entering addresses that will validate address information and formatting per standards.
	9.0	The solution must prevent "other" data entry values that duplicate available values in selection fields (e.g., if a drop-down list includes "Corn", a user cannot enter "Corn" as the value associated with the "Other" drop down value).			✓			The MAEAP Solution can be designed to prevent entering values in free-text fields that may duplicate with specific drop-down values.
	10.0	The solution must use Esri to support GIS and mapping functionality.			✓			The MAEAP Solution will use the latest ESRI ArcGIS JavaScript API and customized web maps to allow users to maintain map layers and base maps without application coded changes.

A	B			C			D
Business Specification Number	Business Specification	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	Contractor must comply with how they will deliver the business Specification. Contractor must meet details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.
11.0	The solution must support optional use of a "calendar picker" when eliciting data entry for date values.			✓			The MAEAP Solution will provide calendar pickers for date entry but will also allow users to key in dates.
11.1	The calendar picker should default in the bidder solution to the current calendar month when being used to select date values.			✓			If a user selects the calendar picker to select a date, the calendar will automatically default to the current month for ease of use.
12.0	The solution must maintain error logs.			✓			The MAEAP Solution will use server-side error logging to log every category of error.
12.1	The solution must allow an authorized user to view the error logs.			✓			The MAEAP Solution will store logs in a database table as well as a file to allow for viewing the logs from a screen in the solution.
13.0	The solution must provide data entry validations on update of a field (versus being done on save or exit of a page).			✓			The MAEAP Solution will validate fields when the user changes focus to a new field and it will prompt them to correct the issue immediately. The KL&A team will work with MDARD MAEAP to determine the required validation rules for each field.

	A	B			C			D
	Business Specification Number	**Business Specification**	**Current Capability**	**Requires Configuration**	**Customization to Software**	**Future Enhancement**	**Not Available**	**Contractor must comply with how they will deliver the business Specification. Contractor must meet details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
	14.0	The solution must be a web-based solution, accessible via an internet connection.			✓			The MAEAP Solution will be a modern, completely web-based solution developed with the Microsoft .NET framework, using the following programming languages and technologies: • Web: C# .NET • Server Side - Controllers – .NET Core API/C# • Client Side – Angular 7+, typescript • Database: SQL Server • Reporting: Crystal Reports or SSRS (Reporting) • Integration: • REST API - Real-time web services • FTS - Batch File transmission • ArcGIS - Geospatial Maps and Layers
	14.1	The solution must be accessible by users from work, home, and public work locations (e.g., from within shared federal office locations, State of Michigan managed office locations, home offices and public work areas).			✓			Any user with access to the internet and a MiLogin ID will be able to access the MAEAP Solution.
	14.2	The solution must be fully functionable without installation of software or files on the end-user device.			✓			The MAEAP Solution will be web-based and will not require any software installation on the end-user's devices.

A	B			C			D
Business Specification Number	**Business Specification**	**Current Capability**	**Requires Configuration**	**Customization to Software**	**Future Enhancement**	**Not Available**	**Contractor must comply with how they will deliver the business Specification. Contractor must meet details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
16.0	The solution must support rich text format (RTF) for data entry, display and reporting (e.g., data entry string can include multiple text formats – bold, color, italics, etc. - in the **same** data field).			✓			The MAEAP Solution will support the use of formatted rich text in free-form text fields and generated correspondence. Display and reports will also support rich text.
16.1	Rich text format for data entry and reporting must include: Note and log entries (e.g., call logs, farm notes, assessment notes, etc.) Assessment risk practices			✓			The MAEAP Solution will support the use of rich text in free-form text fields, such as: • Call logs, farm notes, assessment notes, etc.; • Generated correspondence; and • Assessment risk practices.
17.0	The solution must list recent changes to an entity when an authorized user is viewing entity information (e.g., display a message that the farm was last updated by user "XX" on "MM/DD/YY" when the farm information is being viewed).			✓			The MAEAP Solution will include activity logs on various screens, such as the Entity Detail screen, that will show recent activity performed against that entity, who performed the activity, and when. The activity log will be dynamic to show relevant activity based on the screen being viewed.
17.1	The solution must allow an authorized user to view an administratively configurable number of historical update messages (e.g., interact with the message to view additional changes).			✓			System administrators with appropriate permissions will be able to set the number of messages to be displayed in the activity logs. These messages will display activities that occurred against the given type of entity or record, by whom, and when.
17.1.1	The solution must display additional message in reverse chronological order.			✓			Activity logs will display in reverse chronological order so users can see the most recent changes at the top of the list.

A	B			C			D
Business Specification Number	Business Specification	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	Contractor must comply with how they will deliver the business Specification. Contractor must meet details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.
18.0	The solution must maintain a visible unique system assigned ID for each of the following entities: (a) Farm (b) Contact (c) Business/Company (d) Technician (e) Verifier (f) Education Offering (g) Verification (unique for each instance and system) (h) Assessment			✓			The system will assign a unique ID to each of the identified entities that will be displayed throughout the solution.

A	B			C			D
Business Specification Number	Business Specification	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	Contractor must comply with how they will deliver the business Specification. Contractor must meet details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.
19.0	The solution must allow an authorized user the ability to compare the different values between entities when being reviewed as possible duplicates (e.g., if the system identifies a suspected duplicate farm to a new farm being entered, the user will have the option to compare the farm details between the existing farm and farm being entered).			✓			When a user attempts to save a new entity record, the system will check for potential duplicates. If a potential duplicate is found, the system will show a comparison of the existing and potentially new record with differences highlighted and it will prompt the user to either: • Confirm that the new record is not a duplicate and should be created; • Use the existing record; or • Merge the new and existing record, allowing the user to select which differences to incorporate into the existing record. The logic used to determine potential duplicates will be identified during joint application design sessions, as the points of comparison may differ for various entities.
19.1	The solution must limit the data being viewed for review of possible duplicates based on the user role (e.g., a technician associated with only one of the two farms would only be able to see the detailed farm information for the farm they are associated with, but would be able to see the farm name and location information for both farms since that information will be viewable by all technicians)			✓			The group-and role-based security will allow MDARD administrators to limit access to screens, data on screen, and controls independently, with various levels of access, including view, create, edit, and delete. The KL&A team will work with MDARD to ensure all required elements can be hidden from view. In the example in this specification, read-only access would allow a user with edit access on some farms and read-only on others the ability to still view information for other farms.

	A	B			C			D
	Business Specification Number	Business Specification	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	Contractor must comply with how they will deliver the business Specification. Contractor must meet details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.
	20.0	The solution must allow an authorized user to select which values to use when merging duplicate entity records (e.g., which farm detail will carry forward to the merged farm when duplicate farm entities are merged).			✓			Whether the users selects to merge records during a duplicate-detection scenario or they elect to use the merge option, the system will show a comparison of the two records with differences highlighted. The user, assuming they have appropriate permissions, will be able to select which values to carry forward to the merged record. Values that are the same in both records will automatically be carried forward.
	21.0	The solution must use a new unique ID for merged entities (e.g., duplicate farm records that are merged into one farm will have a different ID than either of the original duplicate farms).			✓			For reporting purposes, each entity will have a unique ID, including entities that are created as the result of merging records. The original ID for both farm records will be maintained in the new, combined farm record.
	21.1	The solution must maintain historical relationships for merged entities (e.g., farms 6754 is the result of having merged 3490 and 2267).			✓			The MAEAP Solution will keep a history of merging and splitting of farms, which will be viewable from the Farm Detail page through a link to the original farm records.
	22.0	The solution must maintain "also known as" (AKA) relationships for name changes.			✓			Contact, Farm, and Business Detail screens will show AKAs whenever there is a name change for the given entity.
	22.1	AKA relationship must include: (a) Contact names (b) Farm names (c) Business names			✓			Contact, Farm, and Business Detail screens will show AKAs whenever there is a name change for the given entity.

	A	B			C			D
	Business Specification Number	Business Specification	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	Contractor must comply with how they will deliver the business Specification. Contractor must meet details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.
	22.2	The solution reporting options must include filters to include AKA values in search results (e.g., if "Smith Brothers Farms" changes to "Smith and Sons Farms", reporting options should include the ability to return records for both "Smith and Sons Farms" as well as the AKA value of "Smith Brothers Farms").			✓			The reporting module will provide a filtering option to include or exclude AKA records so that users can report on the current entity only or report activity that occurred under earlier names.
	23.0	The solution must use role-based security.			✓			The MAEAP Solution will support assigning and creating users, roles, and groups. Administrators will be able to add users to one or more groups, and each group will be assigned to one or more roles. This allows an administrator to not only restrict access to entire pages within the system but also to enable and disable certain functionality inside individual pages. For example, the system could have a role that provides users full access to update and create a particular kind of record, another role that allows users to view but not modify or create that type of record, and other roles that prevent users from even seeing the page that displays that type of record.
	24.0	The solution must use an adaptive, interview style for data entry (e.g., if a data response was X, collect data for A, B and C; if the data response was Y, collect data for E, F and G; etc.).			✓			The data collection forms will dynamically display the next question based on responses to previous questions to ensure that the correct information is collected for each type of activity. The KL&A team will work with the MDARD business users to identify the data collection flows against which the forms will be designed and developed.

A	B			C			D
Business Specification Number	**Business Specification**	**Current Capability**	**Requires Configuration**	**Customization to Software**	**Future Enhancement**	**Not Available**	**Contractor must comply with how they will deliver the business Specification. Contractor must meet details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
24.1	The solution must organize data collection in a sequence that supports the business process (e.g., items are collected in efficient order based on dependencies).			✓			The KL&A team will work with business users to map collection flows and then use these flows to design an efficient and effective solution that considers dependencies.
24.2	The solution must allow direct navigation to a specific step in the process (e.g., select to jump to step 7 in a 10 step process).			✓			KL&A's design will include a "stepper" in which collected data will be organized into logical groupings that are represented with a hyperlinked, numerical graphic. Users will be able to click on a number to access a specific section of data collection.
25.0	The solution must use output drivers/options of the local device to manage solution outputs (printing, saving, sharing, etc.).			✓			The MAEAP Solution will use the device's drivers to perform various output actions, such as printing, saving, and sharing.
26.0	The solution must provide electronic signature functionality.			✓			The MAEAP Solution will support electronic signatures with browser-based drawing or typing a signature, with user credentials, or by confirming that a signed paper form has been scanned and uploaded to the case.

A	B			C			D
Business Specification Number	Business Specification	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	Contractor must comply with how they will deliver the business Specification. Contractor must meet details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.
26.1	Electronic signature functionality must include: (a) Digitally signing documents via user credentials (e.g., acknowledge signing when logged into the system) (b) Digitally signing documents via a touch screen or other technical device capable of capturing a signature (c) Confirming that a digital image of a physically signed document has been uploaded to the solution (e.g., the signed paper has been scanned and uploaded to the solution).			✓			The MAEAP Solution will support electronic signatures with browser-based drawing or typing a signature, with user credentials, or by confirming that a signed paper form has been scanned and uploaded to the case.
27.0	The solution must provide document management functionally, to include features for records retention.			✓			Uploaded documents and generated correspondence will be stored in the solution's database and displayed on the applicable entity detail screens within the solution. Authorized users will be able to upload and download documents to and from the applicable entity detail screens. Data-retention policies will be handled with background jobs so that purging will be an automatic process. The solution will support index and document metadata, not simply data storage.

A	B			C			D
Business Specification Number	Business Specification	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	Contractor must comply with how they will deliver the business Specification. Contractor must meet details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.
27.1	The solution document management must include: (a) Use of metadata (b) Secure document access			✓			The MAEAP Solution will record, display, and use metadata to support searching and reporting on uploaded documents. Document access will be secure, requiring a login to the MAEAP Solution. The solution will support index and document metadata, not simply data storage.
28.0	The solution must use edit tools, such as spell check, for data entry.			✓			The MAEAP Solution will use standard editing tools, such as spell check.
28.1	The solution must allow an authorized system administrator to configure and manage the edit tools (e.g., maintain a system-wide dictionary, etc.).			✓			The MAEAP Solution will provide the means to edit dictionary entries so that users can add industry terms that might otherwise not be in the dictionary.
29.0	The solution must maintain note entry as a separate data record (e.g., not just appending to a large single data field.)			✓			Each note will be saved as a separate record in the MAEAP Solution's database and associated with the appropriate entity for access on the entity's detail screen.
29.1	Each separate data record for a note must include: (a) User that entered note (b) Date and time of the entered note (c) Note category (d) Status of the note (e.g., logically deleted, etc.)			✓			Note records will include the ID of the user who entered the note, the date and time the note was entered, the category of note (which will be administratively configurable), and the status of the note. This information will be displayed on the respective detail screen.

A	B			C			D
Business Specification Number	**Business Specification**	**Current Capability**	**Requires Configuration**	**Customization to Software**	**Future Enhancement**	**Not Available**	**Contractor must comply with how they will deliver the business Specification. Contractor must meet details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
29.2	The solution must display note history so that the most recent note is the predominant (first) record displayed.			✓			Notes will be displayed in reverse chronological order so that the newest notes appear at the top of the list.
30.0	The solution must limit status selections to administratively maintained values.			✓			The MAEAP Solution will present a list of administratively-configured status values. Users will be limited to selecting a value from the list.
31.0	The solution must maintain entered values and rounded values based on administratively configured rounding rules (e.g., if enter 2.4 acres and via rounding rules, it is rounded up to the nearest quarter acre – 2.5 – the system must maintain both values)			✓			The MAEAP Solution will store both the originally-entered value and the rounded value. Both values can be displayed in the system if MDARD wishes. System administrators will be able to maintain rounding rules in the system configuration module.

A	B			C			D
Business Specification Number	**Business Specification**	**Current Capability**	**Requires Configuration**	**Customization to Software**	**Future Enhancement**	**Not Available**	**Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
System Administration							
32.0	The solution must allow an authorized administrator to manage user accounts and access.			✓			The MAEAP Solution will include administrative screens that allow authorized users to maintain user accounts and permissions.

A	B			C			D
Business Specification Number	Business Specification	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.
32.1	Managing user accounts must include: (a) Creating a new account (b) Changing the status of an account (e.g., make inactive) (c) Modifying user roles (e.g., creating/changing the attributes of a user role) (d) Modifying user groups (e.g., creating/changing the attributes of a user group) (e) Modifying user role assignment(s)			✓			The MAEAP Solution will allow for the assignment and creation of users, roles, and groups. Administrators will be able to add users to one or more groups, and each group will be assigned to one or more roles. This allows an administrator to not only restrict access to entire pages within the system but also to enable and disable certain functionality inside individual pages. Also, configuring these settings for users will be mandatory before users can access the system.
32.2	The solution must maintain a history of account management (e.g., when a new user was created, when the status of a user was changed, when the roles of a user were modified, etc.)			✓			The MAEAP Solution will store information about users ID creation and modification, along with tracking changes to roles and groups. This will be part of the audit log functionality and can also optionally be part of an activity log displayed on the applicable screens.

33.0	The solution must allow an authorized administrator to maintain business rules related to the verification status of a farm based on the verification status of one or more of its associated system(s).			✓			The MAEAP Solution will allow an authorized user to configure values for business rules that define what combination of system statuses result in the farm's verification status.

The MAEAP Solution will allow an authorized user to configure values for business rules that define what combination of system statuses result in the farm's verification status.

KL&A will work with business stakeholders to craft the level of criteria. To give a concrete example, requirement 34.1 states:

(a) Verification status of the farm when one or more of its associated systems are verified (e.g., the farm is considered verified when at least one associated system is verified).

(b) Verification status of the farm based on any single, or combination of statuses of associated systems when one or more are not verified."

To meet this requirement the final rule may be configured in this way:

Rule: Allow farms to be verified when any of the following systems are verified.

Enabled: True

Type: Allowed Values

Values: Farmstead, Cropping

Rule: Verification status of the farm based on any single, or combination of statuses of associated systems when one or more are not verified.

Enabled: True

Type: Value Map

Values: (Pending, In Process) = Pending

(Applied) = Awaiting Verification

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Business Specification Number	**Business Specification**	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	**Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
							The system will then use these configured rule values to make decisions.
33.1	Business rules must include: (a) Verification status of the farm when one or more of its associated systems are verified (e.g., the farm is considered verified when at least one associated system is verified). (b) Verification status of the farm based on any single, or combination of statuses of associated systems when one or more are not verified.			✓			The MAEAP Solution will allow an authorized user to configure values for business rules that define what combination of system statuses result in the farm's verification status. See Req. 33.0
34.0	The solution must allow an authorized administrator to maintain business rules associated with drop down list values.			✓			Lookup screens will be developed to allow authorized administrators to create, modify, and remove values from various selection controls throughout the application. See Req. 33.0
34.1	Business rules must include: (a) Limiting values that can be re-used for repetitive data entry for the same entity (e.g. limiting the selection of a practice to only be used once when entering multiple practices for the same farm)			✓			The MAEAP Solution will use field validation and business logic to restrict duplicate entries. The KL&A team will work with MAEAP stakeholders to define all required validation and to capture the business logic required to build the solution. See Req. 33.0
35.0	The solution must allow an authorized administrator to manage user information associated with roles.			✓			The system administration features will allow authorized administrators to define user roles.

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Business Specification Number	Business Specification	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.
35.1	User information must include: (a) Grant level associated with technician role (b) Specialties associated with technician role			✓			Access to different functionality will be assigned to groups, which will be associated with roles. This approach minimizes data entry by allowing the administrator to change a group once and update all user roles with that group at the same time.
36.0	The solution must allow an authorized system administrator to view usage reports of system features.			✓			The MAEAP Solution will allow administrators to view usage reports based on metrics such as page views, report runs, functional stats, and user login data over time.
36.1	System features must include: (a) User list, user count, total usage and date last used for each report (b) User list, user count, total usage and date last used for each ad hoc query (c) Login count and date last logged in for each user (d) Acknowledgement status related to bulletins/messages			✓			The MAEAP Solution will be able to generate reports based on the user account and login history tables. KL&A will work with business users to define reporting needs including report layout, filter criteria, and report access.
37.0	The solution must allow an authorized system administrator to maintain system configurable values/data.			✓			The MAEAP Solution's System Maintenance module will have system configuration tables as described in requirement 37.1.

| 37.1 | System configurable values/data must include:

(a) Outcome calculations for identified livestock (e.g., X cattle on Y acreage result in an outcome of ZZ).

(b) System assessments (version, section, risk question, low risk, medium risk and high risk evaluations)

(c) Crop commodities

(d) Livestock class and average weight

(e) Fiscal year (start and end month and day that represent the fiscal year)

(f) Assessment year (start and end month and day that represent the fiscal year)

(g) Status values (by status item/type)

(h) Note categories (e.g., categories for classification of entered notes)

(i) Bulletins/System messages

(j) Education requirements

(k) Practices (to include associated information to identify the related system(s), location dependency and related commodity(ies))

(l) Number of days after a lead generation event to follow up with contacts at the event

(m) Improvement plan action item responsible parties

(n) Projects (to include associations to related practices and/or locations)

(o) Number of historical changes to view about an entity | | | ✓ | | | The MAEAP Solution's System Maintenance module will support configuring all the elements listed in this requirement. Some configurable items will be maintained in a general purpose lookup value area (status codes, for instance), while others will need their own screens to meet the business needs (verification pre-requisites). We realize that many of the configurable items will need to be maintained for each system, so our design will support maintaining system-dependent items on a per-system basis. |

	(p) Units of measure for data collection (e.g., acres, sq. ft, etc.)					
	(q) Rounding rules for units of measure (e.g., round up to the nearest quarter acre, etc.).					
	(r) Required improvement action plan items					
	(s) Verification pre-requisites (criteria to be met to be eligible for verification)					
	(t) Pre-verification checklist items					
	(u) Tasks associated with the completion of a verification (task items that a completed verification triggers)					
	(v) NRCS Practices (for CTAI and MAEAP) with associated unit(s) of measure					
	(w) Commodity memberships (for associating with a farm)					
	(x) Number of days after a Phase 1 education event to remind the hosting technician(s) to enter participant information					
	(y) Number of days prior to a Phase 1 education event to remind the hosting technician(s) of the upcoming event					
37.1.1	The solution must limit changes in configurable values to new data entry from point forward (changes to historical data would need to be managed outside of the system functionality).			✓		Configurable values tables will include status, active date, and inactive date fields to manage when these values are available.

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Business Specification Number	**Business Specification**	**Current Capability**	**Requires Configuration**	**Customization to Software**	**Future Enhancement**	**Not Available**	**Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
38.0	The solution must allow an authorized system administrator to configure the display order of administratively maintained values in lists (e.g., be able to list "other" as the last value in a list).			✓			The MAEAP Solution will include a sort order field in the maintained values lists to allow authorized system administrators to configure the display order.
39.0	The solution must allow an authorized system administrator to maintain system assessment content.			✓			The MAEAP Solution will include front-end screens to allow authorized system administrators to enter and maintain system assessment content.
39.1	System assessment content must include: (a) Risk questions (b) Assessment Information (c) Assessment Status (e.g., identify when being updated versus finalized for the indicated assessment year)			✓			The system assessment content will include the areas listed in this specification. KL&A will review existing paper forms and work with business users to capture the appropriate risk questions, assessment information, and assessment status values for each system assessment form.

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Business Specification Number	Business Specification						Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.
39.2	For each assessment year, configuration must include: (a) Assessment year (b) Assessment name (c) System (d) Assessment sections (e) Section sequence (f) Risk questions to include in assessment			✓			The MAEAP Solution will support assessment content to be unique based on the fields listed in this specification.
39.2.1	For each risk question to system instance for an assessment year, configuration must include: (a) Section (risk questions can only be in one section per system) (b) Sequence in section (c) Low risk practice (d) Medium risk practice (e) High risk practice			✓			The MAEAP Solution's risk question configuration will provide the fields in the specification.
39.2.1.1	For each risk practice, configuration must include: (a) Indicator if required for environmental assurance (MAEAP) verification (b) Identification of associated reference citations (e.g., footnote)			✓			Each risk practice will include an indicator, if required, for MAEAP verification and any associated citations.

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Business Specification Number	Business Specification	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.
39.3	The solution must provide functionality to resolve conflicts with duplicate sequence values for sections and risk questions for a given assessment year.			✓			The MAEAP Solution will check for duplicate sequence values in assessment content, notify the user, and suggest alternate values.
39.4	The solution must pre-populate a new assessment year assessment with content from the previous assessment year (e.g., solution must maintain the assessment content for each assessment year separately).			✓			The MAEAP Solution will include functionality to create assessment content for a new assessment year from a prior assessment year. The solution will maintain as separate records assessment information for each year that the farm participates in the program.

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Business Specification Number	Business Specification	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	Contractor must comply how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.
Audit							

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Business Specification Number	**Business Specification**	**Current Capability**	**Requires Configuration**	**Customization to Software**	**Future Enhancement**	**Not Available**	**Contractor must comply how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
40.0	The solution must maintain full audit logs of all changes			✓			For internal reference only, every table in the database will include audit columns so audit logs can be generated. The Audit Log will contain all historical information. Whenever a record is changed a snapshot of the record will be recorded and viewable in chronological order with differences highlighted.
40.1	Audit logs must include: (a) Date and time of update (b) User that made update (c) Previous value			✓			The audit logs will include the user who made the change, when the change was made, and the field's previous value. The Audit Log will contain all historical information. Whenever a record is changed a snapshot of the record will be recorded and viewable in chronological order with differences highlighted.
41.0	The solution must allow an authorized administrative user to view the audit logs (e.g., must be accessible and natively readable via the solution).			✓			Authorized administrative users will be able to view and print audit logs. The Audit Log will contain all historical information. Whenever a record is changed a snapshot of the record will be recorded and viewable in chronological order with differences highlighted.

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Business Specification Number	**Business Specification**	**Current Capability**	**Requires Configuration**	**Customization to Software**	**Future Enhancement**	**Not Available**	**Contractor must comply how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
42.0	The solution must allow an authorized administrative user to archive audit logs based on record retention policies.			✓			Authorized administrative users will be able to export audit logs to MS Excel for archiving purposes. The Audit Log will contain all historical information. Whenever a record is changed a snapshot of the record will be recorded and viewable in chronological order with differences highlighted.

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Business Specification Number	**Business Specification**	**Current Capability**	**Requires Configuration**	**Customization to Software**	**Future Enhancement**	**Not Available**	**Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
Notifications							
43.0	The solution must allow an authorized user to maintain notification preferences.			✓			The MAEAP Solution will allow an authorized user to select notification preferences from a list of notification options.
43.1	Supported notification methods must include: (a) Text (SMS) (b) Email (c) System dashboard			✓			The MAEAP Solution will use a communication platform called Twilio to support the following notification methods: • Text (SMS) • Email • System dashboard

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Business Specification Number	**Business Specification**	**Current Capability**	**Requires Configuration**	**Customization to Software**	**Future Enhancement**	**Not Available**	**Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
43.2	The solution must allow an authorized user to select one or more supported methods.			✓			The MAEAP Solution will allow an authorized user to select any combination of the notification options.
43.3	The solution must default to a notification preference of system dashboard.			✓			The MAEAP Solution's default notification preference will be set to the system dashboard.

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Business Specification Number	**Business Specification**	**Current Capability**	**Requires Configuration**	**Customization to Software**	**Future Enhancement**	**Not Available**	**Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
Bulletins/System Messages							
44.0	The solution must allow an authorized administrative user to manage bulletins/system messages farms.			✓			The MAEAP Solution will have functionality to create and manage bulletins/system messages to farm locations in the solution.

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Business Specification Number	Business Specification	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.
44.1	Management must include: (a) Identifying the recipients (which user roles will see the bulletin/system message) (b) Setting the display dates (start date/time and end date/time the bulletin/message will be displayed) (c) Priority of the bulletin/message (d) Required acknowledgement flag (indicate which require a user to acknowledge they have read the message)			✓			The bulletin/system message functionality will include multiple controls for authorized users to manage the messages. These will include indicating which roles will see the messages, the dates when the messages will be displayed, the priority of listing messages when there are multiple messages, and if a message must be marked as read.
44.2	The solution must support clickable URL content in the body of the bulletin/message.			✓			The MAEAP Solution will allow content of bulletins/messages to include clickable URLs.
44.3	The solution must display bulletin/system message content sorted by administratively maintained business rules.			✓			The MAEAP Solution will allow system administrators to define configurable business rules for sorting bulletin/system messages via system maintenance screens.
44.3.1	Business rules must include: (a) Highest priority first (b) Most recent within each priority grouping			✓			System administrators will be able to configure business rules for governing how bulletin/system messages are displayed, including bulletin/message priority first, then by reverse chronological order.

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Business Specification Number	**Business Specification**	**Current Capability**	**Requires Configuration**	**Customization to Software**	**Future Enhancement**	**Not Available**	**Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
45.0	The solution must allow an authorized user to view historical bulletins/messages (view expired and acknowledged messages in reverse chronological order based on acknowledgement date, then expiration date).			✓			The MAEAP Solution will store historical bulletins/messages in the database to allow authorized users to sort messages.
45.1	Display order for historical messages must be reverse chronological order based on: (a) Acknowledge date for messages that were acknowledged (b) Expiration date for messages that were not acknowledged			✓			The MAEAP Solution will display historical messages by a default sort order defined by MAEAP.
46.0	The solution must allow an authorized user to acknowledge bulletins/messages that require read acknowledgement.			✓			The MAEAP Solution will allow authorized users to use a multi-select option to select one or more bulletins/messages and set the status to "acknowledged."
46.1	The solution must move acknowledged messages to the message history once acknowledged.			✓			The MAEAP Solution will automatically change the status of acknowledged messages to a status of "historical" and it will record the date the messages were acknowledged.
47.0	The solution must display message history for a rolling 365 days (after an item has been in the history for 365 days for a user, that message can be removed from their history).			✓			The MAEAP Solution will automatically delete historical messages 365 days after their status changed to "historical," and the messages will no longer display. KL&A will implement either logical or physical deletion.

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Business Specification Number	**Business Specification**	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	**Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
Farm Management (Locations)							
48.0	The solution must allow an authorized user to manage farms.			✓			User permission will be used to define which users can manage farms.
48.1	Managing farms must include: (a) Creating a new farm (b) Updating information about an existing farm (to include status) (c) Merging duplicate farms (separate entries for same farm) (d) Merging combined farms (to accommodate acquisition) (e) Splitting farms into separate farms (to accommodate selling part of a farm, etc.)			✓			The MAEAP Solution will allow authorized users to create and update farm information. It will also allow merging and splitting farms based on user-specified business rules for which data from the different records will be retained or updated.
48.1.1	The solution must include functionality to prevent duplicate farms (e.g., systematically search for duplicate/similar farms when creating a new farm, etc.)			✓			When a user creates a new farm, the system will perform a fuzzy-logic search to detect potential duplicates and alert the user.

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Business Specification Number	**Business Specification**	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	**Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
48.1.2	Farm information must include: (a) Site address (if applicable) (b) Town range section (PLSS) (c) Farm name (d) Geospatial information (one or more points and/or polygons and related meta data) (e) Contact information (one or more contacts/roles/farm or contact/role/business/farm) (f) Farm details (see system information sheets and stewardship plans) (g) Associated project(s) (h) Public relations approval (has the farm granted approval to be included in press release info, etc.) (i) Associated technician(s) (j) Commodity membership(s)			✓			The MAEAP Solution will store all the information listed in this specification. Information such as contacts and associated technician(s) will be linked to the farm record with a specific contact role.

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Business Specification Number	Business Specification	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.
48.1.2.1	The bidder solution must maintain a contact relationship to a farm to identify at least one owner (e.g., each farm will have at least one owner and owner will be a contact/role/company).			✓			The MAEAP Solution will include a business rule that at least one owner must be added to a farm in order to save the record. If an owner is not present, the system will prevent saving the farm and will prompt the user to identify the farm's owner(s).
48.1.2.1.1	The bidder solution must allow an authorized user to indicate if a change in owner warrants starting the MAEAP program from the beginning (e.g., if ownership changes to a contact not previously involved with the farm, the technician may indicate that the MAEAP program needs to be started from the beginning for the new owner).			✓			The change-of-ownership functionality will be restricted to authorized users and will include a field to indicate if restarting the MAEAP program is required. An optional comment field will also be included to capture notes on this decision.
48.1.2.1.1.1	The bidder solution must update applicable statuses for the farm and related assessments/verifications if the new owner results in needing to start over.			✓			The solution will include a business rule that when a farm must restart the MAEAP program, the status will be updated and the system will archive related assessments/verifications.
48.1.2.2	Minimal information for a farm must include: (a) Location information (b) Contact information for a minimum of one person associated with the farm (c) Status			✓			The MAEAP Solution will include business rules that define the minimal information required to save a farm record, including the location (street address, city, state, zip code, county), a contact (that is an owner), and the status.

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Business Specification Number	Business Specification	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.
48.1.2.3	The bidder solution must limit project associations based on administratively maintained business rules.			✓			System administrators will be able to maintain project association business rules via the System Maintenance screens.
48.1.2.3.1	Business rules must include: (a) Projects limited to practices in use by the farm (b) Projects limited to location of the farm			✓			The business rules will include projects limited to practices used by the farm and farm location.
48.1.2.4	The bidder solution must require a Michigan site address for a farm.			✓			The solution will include a business rule requiring a Michigan site address for a farm record to be saved, or it can pre-populate the state field with Michigan and not allow it to be changed.
48.1.3	The bidder solution must maintain historical relationships between merged and split farms (e.g., if Smith Brothers Farm is split between Joe Smith Farm and Sam Smith Farm the split relationship must be maintained)			✓			When farms are merged or split, all the related IDs will be linked in order to maintain historical references. Statuses will also be used to track active or inactive farm records.
48.1.3.1	The bidder solution must allow an authorized user to view the related farms for a split or merge (e.g., if viewing Sam Smith Farm, the user must be able to view the historical information maintained for Smith Brothers Farm).			✓			Through user permissions and linked IDs, an authorized user can view related farm records for split or merged farms on farm management screens.

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Business Specification Number	Business Specification	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.
48.1.4	The bidder solution must maintain historical data associated with merged and split farms (e.g., if Smith Brothers Farm is split in 2018 between Joe Smith Farm and Sam Smith farm, reports for data in 2017 would reflect data for Smith Brothers Farm but reports for data in 2019 would reflect data for Joe Smith Farm and Sam Smith Farm).			✓			The MAEAP Solution will retain historical data for merged and split farms.
49.0	The bidder solution must allow an authorized user to identify a primary contact associated with a farm.			✓			The MAEAP Solution will allow a contact to be identified as the primary contact.
49.1	The bidder solution must require a phone number and mailing address associated with the primary contact for Tier 1 farms (e.g., once a farm is Tier 1, the primary contact must have both a phone number and mailing address captured for that contact).			✓			The MAEAP Solution will require primary contacts for farms with Tier 1 status to have a phone number and mailing address in order to save the primary contact. Additionally, when a status is applied that qualifies the farm for Tier 1 status, the system will verify that the primary contact has a phone and mailing address. If the information is missing, the user will be prompted to provide it before they are allowed to save the status change.
50.0	The bidder solution must support administratively maintained business rules for updates to a farm location.			✓			The MAEAP Solution will allow farm location business rules to be enabled and disabled based on information in the System Maintenance module of the solution.

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Business Specification Number	Business Specification	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.
50.1	Business rules must include: (a) Limit updates to the location of a verified farm to administrative changes (e.g., location data should be locked with the exception of updating to accommodate official changes in street names, etc.)			✓			The MAEAP Solution will support business rules to limit what verified farm location data can be changed based on specific business conditions (system enrolled in, status, etc.)
51.0	The bidder solution must support business rules for determining the status of a farm based on the verification status of one or more its associated systems.			✓			Business rules will control a farm's status, taking into account the status of its associated system(s) which will be administratively configured via System Maintenance screens.
52.0	The bidder solution must support a primary and secondary status for systems based on the value of the primary status.			✓			The MAEAP Solution will support a primary and secondary status for farm systems. Business and workflow rules will specify valid secondary statuses based on the primary status.
52.1	Primary status will include: (a) Enrolled (default) (b) Pending (c) Pending reverification (d) Verified (e) Retired (f) Unable to verify (g) Withdrawn (h) Merged (i) Split			✓			The MAEAP Solution will support all of the primary statuses listed in this specification.

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52.2	Secondary status will be supported for: (a) Unable to verify (e.g., authorized user can select a secondary value when the primary status is unable to verify)			✓			The MAEAP Solution will allow a secondary status when the primary status is 'Unable to verify.'
53.0	The bidder solution must support uploading one or more information/media files related to a farm (e.g., signed press release documentation, etc.).			✓			The MAEAP Solution will allow attachments through multi-select file browse and/or drag-and-drop functionality.
53.1	Supported formats must include: (a) *.pdf (b) *.jpeg (c) *.gif (d) *.doc/*.docx (e) *.xls/*.xlsx (f) *bmp (g) *.wav (h) *.mpg			✓			The MAEAP Solution will support all the required file types as identified in this specification with the following exceptions: • The system will prevent upload of executable files. • The system will have a 100MB per file-size limit.
53.2	The bidder solution must systematically apply metadata values to uploaded files for record association and record retention purposes.			✓			The MAEAP Solution will assign each uploaded file metadata, including a unique document identifier, date received, and related-farm identifier.
54.0	The bidder solution must allow an authorized user to store one or more digital files associated with a farm.			✓			The MAEAP Solution will allow multiple digital files to be associated with a farm.

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Business Specification Number	Business Specification	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.
55.0	The solution must allow an authorized user to view historical information about a farm (e.g., changes to farm details, etc.)			✓			The MAEAP Solution will allow authorized users to view historical information for a farm through the audit log.

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Business Specification Number	Business Specification	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.
Contact Management (People and Companies)							
56.0	The solution must allow an authorized user to manage contacts.			✓			The MAEAP Solution will include a detail screen so authorized users can enter and manage contacts.
56.1	Managing contacts must include: (a) Creating a new contact (b) Updating information about an existing contact (to include status) (c) Merging duplicate contacts			✓			The MAEAP Solution will include the ability to add and edit contacts. It will also allow authorized users to merge contacts based on business rules.
56.1.1	The solution must include functionality to prevent duplicate contacts (e.g., systematically search for duplicate/similar contacts when creating a new contact, etc.)			✓			When a user creates a new entity that is a person or organization, the system will perform a fuzzy-logic search to detect potential duplicates and alert the user.

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Business Specification Number	**Business Specification**	**Current Capability**	**Requires Configuration**	**Customization to Software**	**Future Enhancement**	**Not Available**	**Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
56.2	Contact information must include: (a) First name (b) Last name (c) Surname (d) Contact Status (e.g., to capture if a contact is deceased, etc.) (e) Role relationship (a single contact can be associated with multiple roles)			✓			The MAEAP Solution's contact table will support all the fields listed in this specification.
56.2.2	Role information must include: (a) Role (b) Company association and status (a single contact/role may be associated with none, one or many company/business) (c) Farm association and status (a single contact/role may be associated with none, one or many farms)			✓			The MAEAP Solution's role table will support all the fields listed in this specification.
56.2.2.1	Company/Business information must include: (a) Company name			✓			The MAEAP Solution's company/business table will support all the fields listed in this specification.

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Business Specification Number	Business Specification						Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.
57.0	The solution must manage mailing address, phone and email information for the following contact relationships: (a) Contact/role (e.g., John Smith filled out a contact card at an event and provided his name and mailing address) (b) Contact/role/farm (e.g., John Smith is the manager of Smith and Sons Farm and has a mailing address and phone number for correspondence related to that farm, which may not be the same as the site address for that farm) (c) Contact/role/business (e.g., John Smith is the Business Manager of Smith Holdings and has a mailing address and phone number for correspondence related to all farms that company is associated with)			✓			The MAEAP Solution will store mailing address, physical address, primary and secondary phone numbers, and email information for contacts. The solution will support contacts being associated with multiple farms/businesses and roles.
58.0	The solution must allow an authorized user to manage relationship activities associated with contact relationships (contact/role, contact/role/farm, contact/role/business).			✓			The MAEAP Solution will allow authorized users to track activities and communications with contacts.

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Business Specification Number	Business Specification	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.
58.1	Relationship activities must include: (a) Call notes (b) Visit notes (c) Creating task reminders (e.g., follow up in 30 days, etc.) (d) Contact notes (additional information not specific to an individual call or visit with the contact). (e) Related location(s) (e.g., farm entity, specific field, greenhouse, etc.)			✓			The MAEAP Solution will allow the user to specify the type of activity (call, visit, email, etc.) and related location and to record long-text notes. Business rules will be defined for creating task reminders.
58.1.1	Call notes and visit notes must include user entry of the date and time, using the current date as the default value.			✓			The activity/communication note will include a date and time field that will default to the current date and time but can be updated by the user.
58.1.1.1	Call notes and visit notes must provide an option for the authorized user to indicate the call or visit confirmed initiating a verification (e.g., capture the farmer interest/request to move forward to verification).			✓			The notes will include an optional field to indicate the call/visit confirmed, initiating the verification process.

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Business Specification Number	Business Specification	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.
58.1.1.2	Call notes and visit notes must provide an option to associate a single note entry to all applicable contact/role/farm and/or contact/role/business associations (e.g., the technician takes a phone call from John Smith and they talk about one farm where John Smith is the manager, and a second farm where John Smith is the producer).			✓			When adding a note on the farm page, a user will be able to select multiple contacts/roles/farms to associate with the note.

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Business Specification Number	Business Specification	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.
Activity Logs							
59.0	The solution must allow an authorized user to enter activities notes that are not associated with a contact or farm.			✓			The MAEAP Solution will allow general activity/communication notes to be entered in the Activity Log module to be displayed on the dashboard. The user may choose not to associate the activity or note with a farm.

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Business Specification Number	**Business Specification**	**Current Capability**	**Requires Configuration**	**Customization to Software**	**Future Enhancement**	**Not Available**	**Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
59.1	Activity notes must include: (a) Note entry (b) Activity date/time (default to current date/time)			✓			The activity/communication note will include the date and a long-text note field. The date and time will default to the current date and time but can be changed by the user.

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Business Specification Number	**Business Specification**	**Current Capability**	**Requires Configuration**	**Customization to Software**	**Future Enhancement**	**Not Available**	**Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
Metrics							
60.0	The solution must allow an authorized user to define metrics for inclusion on dashboard displays.			✓			Dashboards will include a space for displaying metrics. Users may choose from various metrics to include on their specific dashboard based on their specific areas of interest.
60.1	Measures must include: (a) Counts by geospatial boundary (e.g., X farm visits in a conservation district) (b) Counts by role (e.g., x farm visits by technicians) (c) Counts by user (e.g., x farm visits by a single named user)			✓			The MAEAP Solution will support all the measures listed in this specification. The counts will be shown graphically, using clickable charts and graphs.

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60.2	Metrics must include (where applicable to the role/user): (a) New assessments by assessment type (b) Repeat assessments by assessment type (c) MAEAP initial verifications by assessment type (d) MAEAP re-verifications by assessment type (e) Approved Phase 1 events by assessment type			✓			The MAEAP Solution will support all the metrics listed in this specification. The metrics will be shown graphically, using charts and graphs with the ability to change the date ranges displayed.
61.0	The solution must allow an authorized user to define duration goals for each metric (e.g. X farm visits in the 2020 calendar year).			✓			The MAEAP Solution will allow an authorized user to create a goal for each metric.
61.1	Durations must include: (a) Quarterly (b) Annually			✓			The MAEAP Solution will maintain a pre-defined list of durations that an authorized user can select when defining a goal.

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Business Specification Number	**Business Specification**	**Current Capability**	**Requires Configuration**	**Customization to Software**	**Future Enhancement**	**Not Available**	**Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
Dashboards							
62.0	The solution must allow an authorized user to view information in a dashboard-like format.			✓			The dashboard will be the heart of the system; it will display appropriate information that is actionable depending on the role of the user.
62.1	Dashboard sections must include: (a) Progress metrics (b) Task list/reminders (c) Bulletins/messages			✓			The dashboard will support the three requested sections. • The Metric Dashboard will be configurable by program and role, so the panel will display metrics applicable to the users. • The Tasks List/Reminder Dashboard will display tasks assigned to the user or the workgroup(s) to which the user belongs. The top of the panel will show metrics-driven filtering options so that users can quickly see how many of their tasks are due today, are coming up (configurable number of days), or are overdue, then click one of these buttons to see the applicable tasks. • The Bulletins/Messages Dashboard will display bulletins/messages for that user. The user will be able to filter on their bulletins/messages to see which have been read and unread and acknowledge messages that are configured to require acknowledgement.

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Business Specification Number	**Business Specification**	**Current Capability**	**Requires Configuration**	**Customization to Software**	**Future Enhancement**	**Not Available**	**Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
62.2	The solution must present section content applicable to their user role (e.g., a manager may see a summary level progress metric section, a technician may see metrics for their active assessments, annual goals, etc.).			✓			The Dashboard will also be configurable to display functionality based on the user's role. Pre-configured filters and panels will be created and associated with one or more user roles.
62.3	Dashboard content must be interactive, allowing a user to navigate to additional details or other areas of the system based on the presented information (e.g., clicking on a task list item would navigate to the functionality in the system to complete the task, etc.).			✓			The Dashboard will display relevant information as well as allow in-line work, where applicable, to save time switching pages.

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Business Specification Number	**Business Specification**	**Current Capability**	**Requires Configuration**	**Customization to Software**	**Future Enhancement**	**Not Available**	**Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
GIS							
63.0	The solution must support geospatial data, relationships and business rules.			✓			Geospatial data for farms will be stored and integrated with the State's ArcGIS available layers.

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Business Specification Number	**Business Specification**	**Current Capability**	**Requires Configuration**	**Customization to Software**	**Future Enhancement**	**Not Available**	**Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
63.1	The solution must support use of points at time of implementation.			✓			The MAEAP Solution will support associating one or more points with a farm by clicking on an embedded ArcGIS map.
63.2	The solution must support use of polygons and lines in a future release/implementation (e.g., the GIS framework and architecture must be compatible with future use of polygons and lines)			✓			The ArcGIS JavaScript implementation will be used, which technically supports adding polygons and lines.
64.0	The solution must use the State maintained GIS Framework for geospatial boundaries.			✓			The MAEAP Solution will be compatible with any of the State's ArcGIS available layers.
64.1	Geospatial boundaries must include: (a) PLSS (b) Township (c) County (d) Senate District (e) Congressional District (f) House District (g) Watershed Boundary (HUC12) See related framework at https://www.michigan.gov/som/0,4669,7-192-78943_78944---,00.html			✓			User will have the ability to turn on/off layers, including PLSS, Township, County, Senate District, Congressional District, House District and Watershed Boundary as long as the State's ArcGIS team has made them available to the ESRI ArcGIS JavaScript API.

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Business Specification Number	Business Specification	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.
64.2	The solution must allow an authorized system administrator to update data values associated with boundary changes when new versions of the boundaries are available (e.g., updating the Senate District associated with a GIS point when a new version of the Senate District boundaries is released).			✓			An authorized user will be able to update data associated with GIS layers through the use of an alert/message when viewing the geospatial area of a farm.
65.0	The solution must resolve a GIS point associated with a provided address (e.g., return the GIS point for an entered address).			✓			The ability to resolve a GIS point associated with an address will be accomplished using the State's ArcGIS Reverse Geocoding functionality.
66.0	The solution must allow an authorized user to create a GIS point associated with a location when an address is not available using a map interface.			✓			The MAEAP Solution will allow an authorized user to add a point in the Geospatial section of the Farm Detail screen.
67.0	The solution must allow an authorized user to adjust the GIS point associated with a location or address using a map interface.			✓			The MAEAP Solution will allow an authorized user to change a point by dragging it on the map in the Geospatial section of the Farm Detail screen.
68.0	The solution must associate a point with a single geospatial boundary item based on administratively maintained business rules.			✓			The MAEAP Solution will detect the intersection of a point and a shape if applicable. System administrators will be able to maintain applicable business rules.

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Business Specification Number	**Business Specification**	**Current Capability**	**Requires Configuration**	**Customization to Software**	**Future Enhancement**	**Not Available**	**Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
68.1	Business rules must include: (a) Associate with the boundary item based on the inclusion of the point in that boundary.			✓			The System Maintenance area will allow the ability to turn on and off "boundary" detection based on specific farm or system criteria.
68.2	The solution must allow an authorized user to manually override the geospatial boundary associated with a point (e.g., allow a user to identify an alternate county than the county the point is located in).			✓			The MAEAP Solution will allow an authorized user to disable automatic boundary association.
69.0	The solution must identify/resolve boundaries for Michigan Conservation Districts based on townships (Michigan Conservation Districts are associated with one or more townships and share boundaries with townships).			✓			The MAEAP Solution will take advantage of available State ArcGIS township boundary layers to assist in detecting conservation districts.

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Education and Lead Generation							

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Business Specification Number	**Business Specification**	**Current Capability**	**Requires Configuration**	**Customization to Software**	**Future Enhancement**	**Not Available**	**Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
70.0	The solution must allow an authorized administrative user to configure education requirements.			✓			The MAEAP Solution will allow authorized users to configure education requirements under System Maintenance.
70.1	Education requirements must include: (a) Phase 1 for farmers (b) Training courses for technicians			✓			Authorized users will be able to configure Phase 1 education requirements for farmers and training course requirements for technicians.
70.2	Education requirements must include business rules for: (a) Method of delivery (e.g. a farmer must take X online or Y in person to complete Phase 1). (b) Technician trainings (e.g., taking X core in year 1 and 2, etc.) (c) Technical hosted trainings (e.g., hosting X field trainings per year, etc.)			✓			Business rules for education requirements will be maintained under System Maintenance.
71.0	The solution must allow an authorized user to enter Phase 1 education offerings for farmers (approved outside of the system prior to being entered).			✓			The MAEAP Solution will allow authorized users to create and maintain education offerings in the Education Offerings module.

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Business Specification Number	**Business Specification**	**Current Capability**	**Requires Configuration**	**Customization to Software**	**Future Enhancement**	**Not Available**	**Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
71.1	Entered information must include: (a) Technician(s) hosting (b) Date instruction/event was approved (default to current date) (c) Location offered (d) Date offered (e) Start time of event (f) End time of event (g) Name of event (h) County where offered (i) Related digital materials (e.g., upload a PDF file of the event brochure, etc.) (j) Completion form (e.g., form to be completed by participants to record participation. (k) Website link (l) Date pre-instruction packet sent (m) Participants that signed up for Phase 1 (n) Total number of attendees (o) Date participants/attendees added			✓			The MAEAP Solution will include a data-entry screen to record the required information listed in this specification on class offerings and a data-entry screen to upload materials and track class attendance.
71.2	The solution must publish entered Phase 1 education events to a public accessible web page (e.g., update an education list on the MAEAP.ORG web site, etc.).			✓			Educational events will be sent to the MAEAP.ORG website by exporting a comma-separated values (CSV) file in a format that supports MAEAP.ORG.

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Business Specification Number	**Business Specification**						**Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
71.2.1	Published information must include provision of related digital materials (e.g., publish the event brochure with the phase 1 education listing).			✓			The educational event file export will include the necessary related digital material information.
72.0	The solution must alert technicians of approval of Phase 1 education events they are hosting once entered into the system.			✓			The MAEAP Solution can be configured to send the technician a notification when an approved Phase 1 education event they are hosting is entered. The type of notification to be sent will be identified during joint application design sessions (JADs).
73.0	The solution must allow an authorized user to enter education programs for technicians (approved outside of the system prior to being entered)			✓			A data-entry screen will allow authorized users to enter and update education programs.
73.1	Entered information must include: (a) Location offered (b) Date offered (c) Start time of event (d) End time of event (e) Name of event (f) County where offered (g) Completion form (e.g., form to be completed by participants to record participation. (h) Type of technician training			✓			The create/edit data-entry screen will include all the fields listed in this specification.

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Business Specification Number	**Business Specification**	**Current Capability**	**Requires Configuration**	**Customization to Software**	**Future Enhancement**	**Not Available**	**Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
74.0	The solution must allow an authorized user to record when a pre-instruction packet is sent to a technician associated with hosting an upcoming Phase 1 event for farmers.			✓			The MAEAP Solution will allow a user to record when a pre-instruction packet has been sent to a technician either through a data-entry screen or by completing a task.
75.0	The solution must allow an authorized user to provide online Phase 1 courses available to farmers.			✓			The MAEAP Solution will allow an authorized users to maintain links to on-line course materials associated with courses.
76.0	The solution must provide an online form for online Phase 1 education program participants to fill out and physically sign to record completion of the online Phase 1 education program (e.g., an online form that can be filled out online, printed for signature and submitted via USPS mail, or a digital image of the signed form submitted via email). See downloadable form at http://www.maeap.org/uploads/files/Phase1/MAEAP_Educational_Credits_Form.pdf			✓			The MAEAP Solution will provide a public link to a fillable PDF form that can be completed, printed, signed, mailed or emailed.
77.0	The solution must allow an authorized user to track education participation (note that Phase 1 participant tracking, and technician education participation tracking will be separate roles)			✓			The MAEAP Solution will include a data-entry screen for an authorized user to record class attendance in the education section of the farm management page. Technician education would be tracked in the web application's Education Offerings module, either grouped by technician or by offering.

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Business Specification Number	**Business Specification**	**Current Capability**	**Requires Configuration**	**Customization to Software**	**Future Enhancement**	**Not Available**	**Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
77.1	Tracked participants must be contacts in the solution, to include role and company association(s).			✓			Educational event participants will be stored as contacts including their role and company association.
77.2	Tracking participation must include: (a) Recording in person attendance at Phase 1 education for farmers. (b) Recording in person attendance at technician education for technicians. (c) Recording completion of online Phase 1 provided education for farmers.			✓			Participants will be associated with an education event previously entered into the system. The solution will support the types of participant tracking listed in this specification.
77.2.1	The solution must allow an authorized role to upload supporting information in PDF format for participation in online Phase 1 provided education (e.g., completed MAEAP Education Credits Form). See downloadable form at http://www.maeap.org/uploads/files/Phase 1/MAEAP_Educational_Credits_Form.pdf			✓			An authorized user will be able to upload multiple supporting PDF attachments which will be linked to an educational event and the contact who was the trainee.
77.2.1.1	Supporting information must include one of the following: (a) Email from the farmer (b) Completed paper form from the farmer (c) Completed online form from the farmer			✓			Authorized users will be able to configure the types of supporting information that will be allowed, must include the supporting information the values in this specification. These values will be displayed in a drop-down list from which the technicians and other users can select an appropriate value.

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77.3	The solution must provide a reminder to the hosting technician(s) an administratively configurable number of days after the Phase 1 education when the participant information has not been entered (e.g. a reminder 5 days after the event to record the participant information).			✓			The MAEAP Solution will be configured to send technicians notifications when participation information has not been entered for events that they've hosted. The number of days elapsed will be configured in the System Maintenance module.
78.0	The solution must determine based on administratively maintained business rules when a farmer has completed their required education credits.			✓			The MAEAP Solution will maintain business rules for determining when a farmer has completed their education credits. System administrators will be able to maintain the business rules.
78.1	Business rules must include: (a) Combination of required in person education attendance and online education participation (e.g. attend one in person education or complete online provided education).			✓			Business rules will be configured to include in-person attendance and online participation when determining education credits.
79.0	The solution must allow an authorized user to track generated leads.			✓			The MAEAP Solution will include a data-entry screen to enter and track leads.
79.1	(a) The solution must create a contact for generated leads.			✓			When a lead is entered, it will create a contact in the background.
79.2	The solution must associate a technician with a generated lead.			✓			The data-entry screen will allow for a technician to be associated to the lead.

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Business Specification Number	**Business Specification**	**Current Capability**	**Requires Configuration**	**Customization to Software**	**Future Enhancement**	**Not Available**	**Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
79.2.1	The solution must create a reminder based on an administratively maintained number of days for the technician to follow up with the generated lead.			✓			The MAEAP Solution will be configured to send the technician a notification to follow-up on the lead. The number of days governing follow-up notification will be configured in the System Maintenance module.

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Business Specification Number	**Business Specification**	**Current Capability**	**Requires Configuration**	**Customization to Software**	**Future Enhancement**	**Not Available**	**Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
Inventory Management							
80.0	The solution must allow an authorized user to manage products that are inventoried.			✓			The MAEAP Solution will include inventory management functionality.
80.1	Management must include: (a) Creating new products (b) Updating on hand inventory counts by product (c) Product status (retired, active, etc.) (d) Updating information about existing products.			✓			Data entry screens will allow authorized users to create and maintain products, including updating on-hand inventory counts and product status.

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80.1.1	Product information must include: (a) Description (b) Unique ID (c) Photo/image (d) Eligibility criteria			✓			A description, status, and eligibility criteria will be required to create a product. The solution will automatically assign a unique ID to each product and will allow attaching a photo/image of the product to the product record.
81.0	The solution must allow an authorized user to manage inventory location and disbursement.			✓			Data entry screens will allow authorized users to record inventory location and disbursement.
81.1	Inventory location and disbursement must include: (a) On hand storage location (b) Transit method (e.g., name of person taking from inventory for delivery to farm) (c) Transit dates (day when picked up from inventory for disbursement) (d) Site address associated with farm where delivered. (e) Optional installation location (lat/long or geospatial point). (f) Delivery dates (day when delivered to farm).			✓			The Inventory Disbursement screen will include all the fields listed in this specification. Users will select on-hand storage location and transit method from administratively-configured drop-down lists and they will select a site address from the associated farm's information.

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Business Specification Number	**Business Specification**						**Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
82.0	The solution must allow an authorized user to record funding source for delivered products (e.g., which are provided by the MAEAP program and which have been purchased by the recipient).			✓			The Inventory Disbursement screen will include a funding source field for delivered products. The field can be mandatory if required by MAEAP to create a disbursement record. This can be determined during joint application design sessions (JADs).
82.1	Payment information must include: (a) Payee (b) Amount (c) Check number (d) Name on check (e) Date payment received (f) Accounting Service Center validation code			✓			The payment information fields listed in this specification will be included and can be made optional or required, based on the selected funding source. This also can be determined during joint application design sessions (JADs).

A	B	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	D
Business Specification Number	**Business Specification**						**Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
Reporting							

A	B			C			D
Business Specification Number	Business Specification	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.
83.0	The solution must allow an authorized user to run reports according to their user role (e.g., only have the option to run reports they are authorized to run).			✓			User permissions/roles will be used to control access to run various reports.
84.0	The solution must allow an authorized system administrator to create/maintain reports.			✓			The MAEAP Solution will allow authorized users to create and maintain reports.
84.1	Report creation/maintenance must include: (a) Adding/removing data fields (b) Maintenance of non-data field content (headers, logos, etc.) (c) Maintenance of report metadata (version, description, etc.) (d) Report status (archived, active, etc.)			✓			Report creation/maintenance will include maintenance of data fields, non-data field content, metadata, and report status. Changes in data fields will be done through new report layouts. Microsoft SQL Server Reporting Services (SSRS) defines the field values in reports via a deployable report file. In order to add/remove fields, the SSRS report builder would need to be used to design a new report. If there is a business requirement to frequently add and remove fields from a report on-demand, we will work with the business to provide this data outside of SSRS, a customizable Excel export.

A	B			C			D
Business Specification Number	**Business Specification**	**Current Capability**	**Requires Configuration**	**Customization to Software**	**Future Enhancement**	**Not Available**	**Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
85.0	The solution must limit report content according to the authorized user's role (e.g., if a user only has access to data associated with a single Conservation District, the report content will be limited to data associated with that Conservation District).			✓			The MAEAP Solution will utilize user permissions/roles to limit content in reports.
86.0	The solution must allow an authorized system administrator to configure the valid dates supported by reports (e.g., prevent the user from entering an invalid date for a report date range based on the historical information available in the system).			✓			The Solution will support configuring reports to not allow dates entered before a certain date and prevent entering dates in the future.
87.0	The solution must determine when there are no data for the report content and display a message box instead of an empty report.			✓			If no data is returned by a report, the MAEAP Solution will return a system message that no results were found rather than an empty report.
88.0	The solution must identify reports as internal/confidential based on administratively maintained business rules.			✓			The Solution will allow authorized users to configure individual reports as internal/confidential. Wording can be added to the header or footer identifying a report as internal/confidential.

A	B			C			D
Business Specification Number	**Business Specification**	**Current Capability**	**Requires Configuration**	**Customization to Software**	**Future Enhancement**	**Not Available**	**Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
88.1	Business rules must include: (a) Evaluation of Tier 1 status of a farm (e.g., if a farm is not Tier 1, the related data is not available for inclusion in external reporting, regardless of identifiable or aggregate presentation).			✓			The Solution will support configuring reports to include or exclude a farm based on their status.
89.0	The solution must allow an authorized user to export the report data set (the ability to export and the ability to run the report are separate roles).			✓			The MAEAP Solution will provide separate security rules for report generations and report export so that these functions can be secured separately.
89.1	Supported export formats must include: (a) PDF (formatted view) (b) MS Excel (data records)			✓			The MAEAP Solution will support both PDF and MS Excel outputs.
89.2	Exported data records (MS Excel) must include a header row to include version information about the exported report.			✓			When exporting data records, the Solution will include a header row that contains report version information, including the report name, run date/time, and the name of the user that ran the report.
89.2.1	Version information must include: (a) Report name (b) Report run date/time (c) User name that ran the report			✓			The solution will support writing the information listed in this specification into a header row.

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Business Specification Number	Business Specification	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.
89.3	Exported data records (MS Excel) must represent the report displayed data (e.g., if the report includes a calculated value, or a concatenated filed, the exported data must also include the calculated value and concatenated value).			✓			Data exports will match the corresponding report output.
90.0	The solution must allow an authorized user to select the report sections to include when applicable (e.g., if a report includes sections for verification status and farm details, provide an option to select which sections to display on the report).			✓			The MAEAP Solution will allow authorized users to include specific sections on a report when necessary by taking advantage of user prompts before generating a report.
91.0	The solution must allow an authorized user to select applicable filter options (e.g., filters apply only if the report data includes the related data element).			✓			The Solution's reports will include filter options identified during design meetings.

91.1	Filter options must include (where applicable):			✓			The Solution will allow authorized users to maintain report files that contain data fields and parameters, including common report options like headers and logos. This means that the Solution can provide all these filtering options and possibly even more.
	(a) Most current information versus verified information						
	(b) Single date, date range, all dates						Each report will maintain a version and a description field. Reports can activated or deactivated.
	(c) Single, multiple or all geospatial boundary items (e.g., single county, multiple counties or all counties, etc.)						
	(d) Single technician, multiple technicians, all technicians						
	(e) Single verifier, multiple verifiers, all verifiers						
	(f) Single farm status, multiple farm status, all farm statuses						
	(g) Single system, multiple systems, all systems						
	(h) Single program, multiple programs, all programs						
	(i) Single Conservation Practice, multiple Conservation Practice, all Conservation Practices						
	(j) Single project, multiple projects, all projects						
	(k) System verification status						
	(l) Farm verification status (determined based on business rules associated with the status of one or more systems on that farm)						
	(m) Tier 1 status						
	(n) Business Owner						
91.2	The solution must adapt available filter options based on the authorized user's role (e.g., if the user only has access to data associated with a single county, the			✓			User permissions/roles will determine filter options for reports.

A	B			C			D
Business Specification Number	**Business Specification**	**Current Capability**	**Requires Configuration**	**Customization to Software**	**Future Enhancement**	**Not Available**	**Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
	system should not provide a filter for the county).						
91.3	The solution must accurately represent sub-totals (count) by filter and totals according to the selected filters.			✓			Reports will calculate sub-totals and totals based on defined groupings.
92.0	The solution must allow an authorized user to generate date over date comparisons of single date filtered reports (e.g., select a report, select two single dates and the system provides a comparison of report values between the two dates).			✓			The MAEAP Solution will provide comparison reports that will include data for two supplied dates along with delta values.
92.1	The solution must accommodate date over date comparisons when data elements are missing for one of the two selected dates (e.g., have logic that does not calculate the variance if only one of the dates include values for that data point).			✓			The MAEAP Solution will have logic to skip missing data elements when running date-to-date comparison reports.
93.0	The solution must allow an authorized user to generate an assessment (A*SYST) report for a single system/farm and assessment year.			✓			The solution will generate a report of the assessment data entered through the assessment create/edit screens. The report will be filterable by farm, system, and assessment year.
94.0	The solution must allow an authorized user to generate a blank assessment (A*SYST) report.			✓			The MAEAP Solution will generate a blank assessment report based on the Risk Assessment Question Maintenance screen.

A	B			C			D
Business Specification Number	**Business Specification**	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	**Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
94.1	The solution must support report section filters for: (a) Improvement plan (b) Assessment section (one, more than one, or all) (c) Tables X-Y (dependent on A*SYST) (d) MAEAP Required items			✓			Report filter options will be configured in System Maintenance.
94.1.1	The solution must include current improvement plan content for the specific system, farm and assessment year (e.g., the plan content may continue to be updated after the date of the assessment to capture progress being made by the farm, so a report ran in 2021 based on the 2019 assessment year may include updates made in 2021 to the plan content of the 2019 assessment).			✓			The solution will have tables to store improvement plan content for each farm, system, and assessment year. Reports will be configured to pull from the most recent assessment year.
94.2	The solution must include reference citations for included report section content as a report footer.			✓			Reports will be configured to print reference citations for the risk assessment in the report footer.
94.3	The solution must leverage formatting to indicate risk practices required for verification.			✓			KL&A will work with MAEAP to design report layout and to define appropriate data, including risk practices required for verification.
94.3.1	The solution must include page footers for formatting references.			✓			Reports will be configured to include page footers.

A	B			C			D
Business Specification Number	Business Specification	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.
95.0	The solution must allow an authorized user to generate as assessment update impact report for a specific farm.			✓			KL&A will develop an Assessment Update Impact report based on the specification 95.1.
95.1	The assessment update impact report must include: (a) For each system, annual assessment updates to the assessment risk questions and risk practices that occurred since the last completed assessment for that farm. (b) For each system, annual assessment updates to the assessment risk questions and risk practices that occurred since the last verification.			✓			The Assessment Update Impact report will be configured to include changes to risk questions and risk practices since the last assessment and since the last verification to show the impact of the changes instituted by farmer for the program.
96.0	The solution must allow an authorized user to generate a pre-populated verification packet for a single system/farm.			✓			The Solution will include a report option to combine individually defined reports, thus creating a pre-populated verification packet.
96.1	The verification packet must include: (a) Cover letter (see forms and letters) (b) Most recent farm information (c) Most recent system information for all related systems (see example farm information sheet) (d) Stewardship plan (if exists)			✓			The MAEAP Solution will support generating a combo-report for each of the items listed in this specification, pulling from information entered into the system.

A	B			C			D
Business Specification Number	Business Specification	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.
96.2	The solution must include farm and system information, regardless of the system being verified (e.g., there is the potential that additional system verifications will be done during the verification visit).			✓			The report(s) will include information for the systems selected in the filter.
97.0	The solution must allow an authorized user to generate a MAEAP program summary report.			✓			User permission/roles will determine who can generate a MAEAP Program Summary Report.

A	B			C			D
Business Specification Number	**Business Specification**	**Current Capability**	**Requires Configuration**	**Customization to Software**	**Future Enhancement**	**Not Available**	**Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
97.1	The MAEAP program summary report must include: (a) Count and total of risk assessments by system (b) Count and total of risk reductions/conservation practices (c) Count and total of verifications by system (d) Count and total of reverifications by system (e) Retention rate of program (number reverified related to those eligible) (f) Count and total of farms new to the MAEAP program (g) Count and total of farms at Tier 1 (h) Count and total by county and overall for number of farms covered by program (CTAI, etc.) (i) Count and total by county and overall for number of acres covered by program (CTAI, etc.)			✓			A MAEAP program summary report can be configured to include all the data elements listed in this specification.
98.0	The solution must allow an authorized user to generate a CTAI report.			✓			User permission/roles will determine who can generate a CTAI report.

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Business Specification Number	**Business Specification**	**Current Capability**	**Requires Configuration**	**Customization to Software**	**Future Enhancement**	**Not Available**	**Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
98.1	The CTAI report must include: (a) County (b) Stewardship plan (plan ID) (c) Technician name (d) Proposed funds (e) Obligated funds (f) Implemented funds (g) Conservation practice			✓			A CTAI report will be configured to include all of the data elements listed in this specification.
99.0	The solution must allow an authorized user to generate a farm specific report.			✓			User permission/roles will determine who can generate a Farm report.

A	B			C			D
Business Specification Number	Business Specification	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.
99.1	The farm specific report must include: (a) Farm details (location, description, related contacts, crops information, livestock information, geospatial boundary relationships, etc.) (b) Tier status for a farm (c) Phase 1 progress (education history, etc.) (d) Phase 2 progress by system (visit history, assessment information, improvement action plan items, progress and due dates, etc.) (e) CTAI cost share information by stage (f) Verification status by system (requested, issued, signage info, expiration, etc.) (g) Associated project(s) (h) Complaint history (i) Notes history (j) Public relations opt-in status			✓			A Farm report will be configured to include all the data elements listed in this specification from information entered into the system.
100.0	The solution must allow an authorized user to generate a farm asset inventory report.			✓			User permission/roles will determine who can generate a Farm Asset Inventory report.

A	B			C			D
Business Specification Number	Business Specification	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.
100.1	The farm asset inventory report must include: (a) Count and total of systems (b) Count and total of livestock (c) Count and total of crops (d) Count and total of livestock load (outcome) (e) Count and total of fuel storage			✓			A Farm Asset Inventory report will be configured to include all the data elements listed in this specification from information entered into the system.
101.0	The solution must allow an authorized user to generate an environmental outcome specific report.			✓			User permission/roles will determine who can generate an Environmental Outcome Report.
101.1	The environmental outcome report must include total by county and overall for: (a) Acres of cover crop (b) Acres of no-till/zone till/grass cover (c) Acres of conservation tillage (d) Number of gullies stabilized (e) Acres receiving manure in CNMP or NMP (f) Field management tons/year sediment (g) Field management pounds/year Phosphorus (h) Field management pounds/year Nitrogen (i) Linear feet of buffer/filter strips			✓			An Environmental Outcome Report can be configured to include all the data elements listed in this specification.

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Business Specification Number	Business Specification	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.
	(j) Acres of filter strip						
	(k) Filterstrip tons/year sediment						
	(l) Filterstrip pounds/year Phosphorus						
	(m) Filterstrip pounds/year Nitrogen						
	(n) Livestock exclusion converted to acres						
	(o) Livestock exclusion tons/year sediment						
	(p) Livestock exclusion pounds/year Phosphorus						
	(q) Livestock exclusion pounds/year Nitrogen						
	(r) Silage/feed leachate runoff acres						
	(s) Gallons of silage leachate						
	(t) Silage leachate #/year BOD (5-day)						
	(u) Silage leachate #/year Phosphorus						
	(v) Silage leachate #/year Nitrogen						
	(w) Site total, Tons/yr sediment						
	(x) Site total, lbs/yr Phosphorus						
	(y) Site total, lbs/yr Nitrogen						
	(z) Total acres receiving pesticides						
	(aa) Total acres receiving fertilizer						
	(bb) Total acres irrigated						
	(cc) GHAS total sq ft in production area (converted to acres)						

A	B			C			D
Business Specification Number	Business Specification	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.
	(dd)Milkhouse waste discharge eliminated (ee)Total volume of manure produced (ff) Total volume of manure being applied (gg)Total volume of manure sold (hh)Total volume of manure given away (ii) Pounds of N available (jj) (kk)Pound of P available (ll) Pound of K available (mm) Total amount of fuel stored (gal) (nn)Pounds of fertilizer storage capacity (oo)Pounds of pesticide storage capacity (pp)Number of wells meeting distance						
102.0	The solution must allow an authorized user to generate an **education services specific report**.			✓			User permission/roles will determine who can generate an education services reports.
102.1	The education services specific report must include: (a) Phase 1 in person education events for farmers (b) Phase 1 online education for farmers (c) Education for technicians			✓			An Education Services report will be configured to include all the data elements listed in this specification.

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Business Specification Number	Business Specification	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.
102.1.1	Phase 1 in person report details must include: (a) Hosting technician(s) (b) Title (c) Approval Date (d) Event date (e) Start time (f) Date pre-instruction packet sent (g) Date participant information entered by technician (h) Total and count by location county (i) Count of participants (j) Count of Attendees			✓			A Phase 1 In-Person education services report can be configured to include all of the data elements listed in the specification based on information entered into the system.
102.1.2	Phase 1 online education report details must include: (a) Title (b) Date attended/submitted (c) Total and count by county the farmer's farm is located in			✓			A Phase 1 Online Education report will be configured to include all the data elements listed in this specification based on information entered into the system.

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Business Specification Number	**Business Specification**	**Current Capability**	**Requires Configuration**	**Customization to Software**	**Future Enhancement**	**Not Available**	**Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
102.1.3	Education for technicians report details must include: (a) Title (b) Date attended (c) Type of technician training (d) Total and count by county the technician is associated with			✓			An Education for Technicians report will be configured to include all of the data elements listed in this specification based on information entered into the system.
103.0	The solution must allow an authorized user to generate a lead generation report.			✓			User permission/roles will determine who can generate a Lead Generation report.
103.1	The lead generation report must include: (a) Detailed list and count by county the lead is associated with			✓			A Lead Generation report will be configured to include all the data elements listed in this specification.
103.1.1	Detailed list must include: (a) Lead name (b) Associated technician (c) Follow up status (when done, when due)			✓			The detailed Lead Generation report will be configured to include all the data elements listed in this specification.
104.0	The solution must allow an authorized user to generate an inventory specific report.			✓			User permission/roles will determine who can generate inventory reports.
104.1	The inventory specific report must include: (a) Count and total of signs by type			✓			An Inventory report will be configured to include all the data elements listed in this specification.

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Business Specification Number	Business Specification	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.
105.0	The solution must allow an authorized user to generate a multi-year (fiscal) report.			✓			User permission/roles will determine who can generate a Multi-Year Fiscal Report.
105.1	The multi-year (fiscal) report must include: (a) Count and total of farms new to the program by year (b) Count and total of farms new to the program by status obtained their first year (e.g., of the 25 new farms to the program in year XX, 5 completed phase 1, 3 completed phase 2 and 2 were verified) (c) Count and total of verifications by system by year (d) Count and total of farms with verifications by year			✓			A Multi-Year Fiscal Report will be configured to include all the data elements listed in this specification.
105.2	The solution must allow an authorized user to specify: (a) First year to be included (b) Number of sequential years to be included			✓			The Multi-Year Fiscal Report will be filterable by the parameters listed in this specification.
106.0	The solution must allow an authorized user to generate technician specific report.			✓			User permission/roles will determine who can generate technician reports.

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Business Specification Number	Business Specification	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.
106.1	The technician specific report must include: (a) Count and total practices by system (b) Count and total farm activities (visits, assessments, etc.) (c) Count and total education events provided (location information to reflect where the education was provided) (d) Count and total technician education events attended (to include education title/training name) (e) Count and total Phase 1 education events hosted (location information to reflect where the education was provided) (f) Count and total of lead generations (g) Applicable workflow metrics (h) Upcoming tasks and due dates by task (i) Grant level (j) Specializations			✓			A Technician report will be configured to include all the data elements listed in this specification.
107.0	The solution must allow an authorized user to generate contact specific report.			✓			User permission/roles will determine who can generate Contacts reports.

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Business Specification Number	**Business Specification**	**Current Capability**	**Requires Configuration**	**Customization to Software**	**Future Enhancement**	**Not Available**	**Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
107.1	The contact specific report must include: (a) Contact (b) Role/Company relationships (c) Contact activity summary (by role/company relationships) (d) Upcoming reminders and due dates by contact/role/company			✓			A Contacts report will be configured to include all the data elements listed in this specification.

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Business Specification Number	**Business Specification**	**Current Capability**	**Requires Configuration**	**Customization to Software**	**Future Enhancement**	**Not Available**	**Contractor must comply with how they will deliver the business Specification. Contact details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
Ad Hoc Queries							
108.0	The solution must allow an authorized query administrator to maintain ad hoc queries.			✓			An authorized user will be able to search for various regulated entities and risk assessments in the system and save the results of the ad-hoc query. Regulated Entities refers to any entity that will be certified, typically a farm or landowner.

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Business Specification Number	Business Specification	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	Contractor must comply with how they will deliver the business Specification. Contact details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.
108.1	Maintenance must include: (a) Creating the query (b) Updating/revising the query filters (c) Updating/revising the query fields (d) Updating the metadata (description, etc.) (e) Maintenance of query metadata (version, description, etc.) (f) query status (archived, active, draft, etc.)			✓			When viewing the query results, a user will have the option to create a new saved search from the current search. When saving a search, an authorized user will select a category from a configured list of options. If the new search is based on a previously saved search, the original search will be retained.
109.0	The solution must allow an authorized system administrator to manage user access to the queries (e.g., the query administrator creates and publishes the queries, the system administrator sets user access to them).			✓			The solution will support saving advanced searches for future access and sharing with other users. Only users with appropriate permission will be allowed to execute and publish searches. System administrators will also be able control access to the published searches.
110.0	The solution must allow an authorized user to run the published queries.			✓			Administrators will define users' ability to run published queries based on user roles.
111.0	The solution must allow an authorized user to export the query result set.			✓			Administrators will define users' ability to export the results of published queries based on user roles.
111.1	Supported export formats must include: (a) PDF (fixed view) (b) MS Excel (data records)			✓			The MAEAP Solution will support exporting to PDF and MS Excel.

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Business Specification Number	**Business Specification**	**Current Capability**	**Requires Configuration**	**Customization to Software**	**Future Enhancement**	**Not Available**	**Contractor must comply with how they will deliver the business Specification. Contact details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
111.2	Exported data records (MS Excel) must include a header row to include version information about the exported query result set.			✓			The MAEAP Solution will export a header row that will include version information about the query, including the query name, query run date/time, and the name of the user the created the query.
111.2.1	Version information must include: (a) query name (b) query run date/time (c) User name that ran the query			✓			The MAEAP Solution will export a header row that will include version information about the query, including the query name, query run date/time, and the name of the user the created the query.

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Business Specification Number	Business Specification	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.
Stewardship Plans							
112.0	The solution must allow a forms administrator to maintain templates using MS Word.			✓			KL&A has extensive experience designing, building, and integrating document assembly solutions in web applications. Our approach is to split document assembly into two templates. The first template is a standard Microsoft Word document template that defines general document layout and letterhead, but not content. The content (text) template will be dynamically maintained in the application as an HTML-based razor template that can reference functional entities, passed in as Entity Framework Objects. The use of a razor template gives full access to C# logical functions, looping functionality, and string formatting functions.
112.1	Maintenance must include: (a) Creating new templates (b) Updating existing templates (c) Maintaining meta data for each template			✓			The MAEAP Solution allows authorized user to create and update template text, including optional metadata such as descriptions and statuses.
112.1.2	Meta data to include: (a) Status (inactive, draft, etc.) (b) Version information (c) Description			✓			The template approach supports storing metadata to track status, version, and description.

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Business Specification Number	Business Specification	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.
113.0	Forms and letters must include: (a) 2-month until verification lapse letter (b) 6-month until verification lapse letter (c) Tier 1 letter (d) Verification lapse letter (e) Forest wetlands habitat (FWH) Congratulations letter (f) MAEAP congratulations letter (g) Director congratulations letter (h) MAEAP congratulations certificate (i) CAS FAS LAS GHAS Info form (j) FWH Info form (k) Cropping cover sheet (l) Farmstead cover sheet (m) Greenhouse cover sheet (n) Livestock coversheet (o) FWH cover sheet (p) Livestock CAFO coversheet (q) Verification checklis			✓			The Solution will support all the forms and letters listed in this specification. KL&A will provide this ability in other systems in the past via a letter queue where users can choose to "stitch" letters together to save time retrieving them from a printer.
114.0	The solution must use the current template when generating related forms or letters.			✓			KL&A's template approach will only the most current template to generate forms and letters.
115.0	The bidder solution must allow an authorized user to generate forms or letters using the maintained template.			✓			User permission/roles will determine access to generating forms and letters.

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Business Specification Number	**Business Specification**	**Current Capability**	**Requires Configuration**	**Customization to Software**	**Future Enhancement**	**Not Available**	**Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
115.1	The solution must determine when there are no data for the form/letter and display a message box instead of an empty form/letter.			✓			The MAEAP Solution will return a system message that no results were found rather than return an empty form/letter.
115.2	The solution must allow an authorized user to modify the generated form/letter prior to finalizing (e.g., edit content after the template is populated with the applicable data values).			✓			The MAEAP Solution allows authorized users to optionally modify generated template text before final rendering as PDF.
115.3	The solution must save the finalized form/letter as a PDF.			✓			The document assembly function will be able to output PDF format.
115.3.1	The solution must systematically apply metadata values to the finalized PDF file for record association and record retention purposes.			✓			When a letter/form is generated, key metadata values such as farm ID, technician, system will be saved with the PDF file for record retention and search purposes.

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Business Specification Number	**Business Specification**	**Current Capability**	**Requires Configuration**	**Customization to Software**	**Future Enhancement**	**Not Available**	**Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
Stewardship Plans							

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Business Specification Number	**Business Specification**	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	**Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
116.0	The solution must allow an authorized user to maintain a stewardship plan.			✓			The MAEAP Solution's Farm Management module will include screens to enter and maintain Stewardship Plans per system.
116.1	The solution must support uploading one or more information/media files in support of an assessment and/or action plan item.			✓			The MAEAP Solution will allow attachments through multi-select file browse and/or drag-and-drop functionality.
116.1.1	Supported formats must include: (a) *.pdf (b) *.jpeg (c) *.gif (d) *.doc/*.docx (e) *xls/*.xlsx (f) *.bmp (g) *.wav (h) *.mpg			✓			The MAEAP Solution will support all the required file types as identified in this specification with the following exceptions: • The system will prevent upload of executable files. • The system will have a 100MB per file-size limit.
116.1.2	The solution must systematically apply metadata values to uploaded files for record association and record retention purposes.			✓			The MAEAP Solution will capture metadata for each uploaded file, including a unique document identifier, date received, and related farm identifier. The solution will support index and document metadata, not simply document storage.
116.2	The solution must limit associating a stewardship plan to a single farm.			✓			Logic will be implemented such that a stewardship plan can only be associated to one farm.

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Business Specification Number	Business Specification	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.

116.3	A stewardship plan must include:
	
	(a) Identifying the applicable NRCS practices
	
	(b) For each practice, identifying:
	
	   a. Conservation plan details
	   b. Fund and contract details
	   c. Responsibility details
				✓			The Stewardship data-entry screens will include all the fields listed in this specification. The NRCS practices will be selectable from an administratively-configured drop-down list.

116.3.1	Conservation plan details must include: (a) Unit of measure (b) Quantity/Magnitude (c) Status (d) Planned Date (e) Completed Date (f) Certified Date			✓			The Conservation Plan data-entry screens will include all the fields listed in this specification. Unit-of-measure and Status will be selected from administratively-configured drop-down lists.
116.3.2	Fund and contract details must include: (a) Proposed funds (b) Obligated funds (c) Implemented funds (d) Funding source (e) Receipt of service code (f) Contract item #(s)			✓			The Fund and Contract data-entry screens will include all the fields listed in this specification. Funding source will be selected from an administratively-configured drop-down list.

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Business Specification Number	**Business Specification**	**Current Capability**	**Requires Configuration**	**Customization to Software**	**Future Enhancement**	**Not Available**	**Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
116.3.3	Responsibility details must include: (a) Responsible entity (b) Farm (c) Technician/Provider			✓			The Responsibility data-entry screens will include all the fields listed in this specification. Responsible entity and Technician/Provider will be selected from drop-down lists. Farm will be pre-populated from the associated Farm Management record.
117.0	The solution must allow an authorized user to select the practice(s) and unit of measure from an administratively maintained list of values (NCRS practices).			✓			System maintenance screens will allow an authorized user to maintain a list of NCRS practices/values for selection from the data-entry screens.

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Business Specification Number	**Business Specification**	**Current Capability**	**Requires Configuration**	**Customization to Software**	**Future Enhancement**	**Not Available**	**Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
Assessments/Improvement Action Plans							
118.0	The solution must synchronize the online and printed assessment content (same content, same order).			✓			The MAEAP Solution's Assessment report will be configured to meet MAEAP's needs, including matching the online assessment screens' order and content.

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Business Specification Number	**Business Specification**	**Current Capability**	**Requires Configuration**	**Customization to Software**	**Future Enhancement**	**Not Available**	**Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
119.0	The solution must allow an authorized user to complete an assessment.			✓			User permission/role will determine who can enter an assessment.
119.1	Supported assessments must include: (a) Farm*A*Syst (b) Crop*A*Syst (for Field and Vegetable Producers) (c) Crop*A*Syst (for Nursery Crops and Christmas Tree Producers) (d) Fruit*A*Syst (for Orchards and Small Fruit) (e) Greenhouse*A*Syst (f) Livestock*A*Syst (g) Forest, Wetlands & Habitat*A*Syst			✓			The MAEAP Solution will include seven assessment types and the questions will be customized for each system assessment.

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Business Specification Number	**Business Specification**	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	**Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
119.2	The solution must maintain a unique record set for each assessment (e.g. preserve each assessment for an A*SYST).			✓			Each assessment type will be assigned a unique identifier that will determine the questions asked. KL&A has built this type of functionality for MDARD in the INTELS application where different inspection types are assigned a project type. The questions asked and the workflow is driven based on the selected project type.

KL&A expects that each Assessment to be an instance of a general Assessment that is configured by an authorized user. An authorized user would define key information, such as system name, icon, assessment reports and specific business rules. Once configured in this way, an assessment would be available to be used without any system changes. |
| 119.3 | The solution must support uploading one or more information/media files in support of an assessment and/or action plan item. | | | ✓ | | | The MAEAP Solution will allow attachments through multi-select file browse and/or drag-and-drop functionality. |

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Business Specification Number	**Business Specification**	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	**Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
119.3.1	Supported formats must include: (a) *.pdf (b) *.jpeg (c) *.gif (d) *.doc/*.docx (e) *xls/*.xlsx (f) *.bmp (g) *.wav (h) *.mpg			✓			The MAEAP Solution will support all the required file types as identified in this specification with the following exceptions: • The system will prevent upload of executable files. • The system will have a 100MB per file-size limit.
119.3.2	The solution must systematically apply metadata values to uploaded files for record association and record retention purposes.			✓			The MAEAP Solution will assign each uploaded file metadata, including a unique document identifier, date received, and related farm identifier. The solution supports index and document metadata, not simply document storage.
119.3.3	The solution must allow an authorized user to associate the uploaded information/media file with more than one action plan item at a time (e.g., upload and associate with action plan items 3, 8 and 12 without having to upload 3 separate times).			✓			The MAEAP Solution will allow a many-to-one relationship between an action plan item and uploaded information/media file.

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Business Specification Number	Business Specification	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.
119.4	The solution must limit associating an assessment (and action plan) to a single farm.			✓			The MAEAP Solution will define a 1:1 relationship between an assessment and a single farm, and an action plan and a single farm.
120.0	The solution must pre-populate new assessments for re-assessment using applicable values from previous assessment and/or farm details.			✓			The MAEAP Solution will be configured to copy the previous assessment values and farm details into a new re-assessment.
121.0	The solution must allow an authorized user to maintain an improvement action plan.			✓			The MAEAP Solution will have Improvement Action Plan data-entry screens to maintain an Improvement Action Plan.
121.1	The solution must create the baseline plan as an outcome of the completed assessment.			✓			The MAEAP Solution will be configured to populate a baseline improvement plan using text provided by MAEAP, determined by values gathered during the assessment.
121.2	The solution must allow more than one assessment to be associated with a single action plan.			✓			The solution will allow a many-to-one relationship between an assessment and action plans.

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Business Specification Number	**Business Specification**	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	**Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
121.3	Maintenance of the improvement action plan must include: (a) Adding action plan items (e.g., changes in following years resulted in needing to add additional items to be current with what will be needed for verification, etc.). (b) Assigning a responsible party for an action plan item (default to farmer) (c) Entering notes for an action plan item (d) Uploading additional information/media files related to an action plan item (e) Planned completion date (f) Actual completion date (g) Status (active, removed, etc.) (h) Reminder indicator (i) Reminder lead time (in number of days			✓			Maintenance of the Improvement Action Plan will include all the features listed in this specification through data-entry screens and/or data fields.
121.3.1	Responsible parties must be selected from an administratively maintained list of values (e.g., farmer, technician, contractor, CCA, etc.)			✓			The Responsible Party field will be a drop-down field linked to a list of values maintained in System Maintenance.

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Business Specification Number	Business Specification	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.
121.3.2	The solution must remind the technician(s) associated with the action plan according to the indicated reminder values for the action plan item.			✓			The MAEAP Solution will be configured to send the technician a notification/reminder to follow up on action plan items. The number of days will be configured in the System Maintenance module.
121.3.3	Required elements of an action plan item will be administratively defined (e.g., the planned completion date and reminder may be administratively configured as optional).			✓			An authorized user will be able to set whether an element of an action plan is required or optional. Information requirements and dependencies will be defined during joint application design sessions (JADs).
122.0	The solution must identify verification candidates based on the completion of all MAEAP required items on an improvement action plan.			✓			The MAEAP Solution will include business rules to identify verification candidates. The business rules for candidate selection could include the location of the farm and the candidates, as well as the experience of the candidates as it related to Improvement Action Plan items.

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Business Specification Number	**Business Specification**	**Current Capability**	**Requires Configuration**	**Customization to Software**	**Future Enhancement**	**Not Available**	**Contractor must comply how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
Verifications							
123.0	The solution must allow an authorized user to record that a farm has requested verification.			✓			The solution will allow a user to navigate to the appropriate system on the Farm Detail page and log all verification information. Once entered, a list of all verifications will be displayed. The data field or other log of the request for verification will be available in addition to the actual verification itself.
123.1	Recorded information must include: (a) Date and time of request (b) Contact/Person that made the request (c) Method the request was made (phone call to MDARD, email to MDARD, online contact form submitted to MDARD, etc.) (d) System(s) requested			✓			Users will be able to select the data and time from a standard calendar picker or key it in. They will be able to select the requestor from a drop-down list that is populated with the contacts associated with the given farm or select New Contact. They will select the contact method from an administratively-configured drop-down list. Multiple systems can be associated with a verification and the verification record will be listed under each system area on the Farm Detail page.

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Business Specification Number	**Business Specification**	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	**Contractor must comply how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
123.2	The solution must allow an authorized user to record the name associated with the person making the request when the person making the request is not a known contact in the system (e.g., the person is not required to be a known contact in order to make the request).			✓			If a contact is not available, an authorized user be able to select New Contact from the drop-down to add a new contact on-the-fly.
124.0	The solution must allow an authorized user to update an administratively maintained pre-verification checklist for a farm.			✓			A pre-verification checklist will be associated with the system. A tool to build the checklist based on administratively-configured values will be developed.

A tool as referenced above means a screen that will allow an authorized user to configure and customize a checklist, which is included in the overall cost. We did not wish to imply a third-party or standalone tool would be used. |
| 124.1 | Updates must include:
(a) Date checklist item was researched
(b) Outcome of research for that item
(c) MDARD staff that completed the research (default to the system user providing the update) | | | ✓ | | | The Solution will support enter the date and outcome of research. The *staff who completed the research* will default to the logged-in user, but it can be updated with another staff member's name. |
| 125.0 | The solution must allow an authorized administrative user to define the criteria to be met to be eligible for verification. | | | ✓ | | | Verification criteria for each system will be maintained under System Maintenance. |

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Business Specification Number	**Business Specification**	**Current Capability**	**Requires Configuration**	**Customization to Software**	**Future Enhancement**	**Not Available**	**Contractor must comply how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
125.1	Criteria must include: (a) Farmer has requested verification (b) Farm is Tier 1 status (c) Phase 1 completed for that farm in past 3 years for a new verification (d) Farm pre-verification checklist has been completed			✓			Administrators will be able to enable and disable all criteria listed in this specification.
126.0	The solution must allow an authorized user to prepare a verification "packet".			✓			The Solution will support generating a verification packet from the verification detail record without navigating away from the Farm Detail page.
126.1	The verification packet must include: (a) Verification cover letter(s) (b) Verification checklist (c) Farm Information Sheet(s) (d) Public relation release (part of farm information sheet) (e) Photo release (part of farm information sheet) (f) Logo MOU (part of farm information sheet) (g) Sign received form			✓			The packet will include a cover letter with dynamic template text, a verification checklist, applicable information sheets, public relation release, photo release, MOU, and a sign received form. This packet will be a mix of dynamic letters, static forms, and/or reports.

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Business Specification Number	**Business Specification**	**Current Capability**	**Requires Configuration**	**Customization to Software**	**Future Enhancement**	**Not Available**	**Contractor must comply how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
126.2	Packet content must be pre-populated with farm and system specific information.			✓			The MAEAP Solution will use a combination of dynamic letter and reports, along with static forms, to generate a single merged PDF verification packet. KL&A envisioned PDF for portability reasons, however our correspondence solution could also output to Microsoft Word format if the State chooses.
126.3	The solution must allow an authorized user to identify the contact and associated mailing address to use when populating the verification packet forms (e.g., select which to use when there is more than one associated with the farm).			✓			Packet generation will allow an authorized user to select a farm contact, which will be merged where appropriate, into the packet content.
127.0	The solution must allow an authorized user to complete a verification.			✓			The MAEAP Solution will allow an authorized user to record a completed verification.
127.1	Completing a verification must include: (a) recording verified/updated information sheet (b) Recording the verification date (no default value) (c) Recording the verifier (default to current user entering verification results)			✓			A completed verification will include all the data in this specification. The verifier will default to the user currently logged in. Default values can be overridden.

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Business Specification Number	**Business Specification**	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	**Contractor must comply how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
128.0	The solution must allow an authorized user to capture digital signatures on verification related forms.			✓			A verification record will have a page that allows digital signatures to be captured on a mobile device. The solution will be compatible with all devices that support web browsers, not just mobile devices.
129.0	The solution must update improvement action plan items based on administratively maintained business rules.			✓			Improvement Action Plan items and business rules will be maintained on a per-system basis in the System Maintenance area.
129.1	Business rules must include: (a) Update the uncompleted action items to completed for MAEAP items associated with the system and farm that has been verified (e.g., being verified confirms the action item was completed)			✓			The ability to update uncompleted actions items when verified will be turned on or off for each system. "Turned on and off for each system" is defined by business rule that is configured to apply to specific systems or specific action items could be enabled or disabled in order to effect how action items are completed. See answer to req. 11 for more details on our general approach to building configurable business rules.
130.0	The solution must add administratively configured tasks to associated roles related to the completion of a verification.			✓			Administrators will maintain task templates, which are collections of tasks that can be applied to generate all tasks at once with the ability to chain due dates together based on business rules.

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Business Specification Number	**Business Specification**	**Current Capability**	**Requires Configuration**	**Customization to Software**	**Future Enhancement**	**Not Available**	**Contractor must comply how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.**
130.1	Tasks must include: (a) Creation of the "Congratulatory Letter" for Director signature (b) Creation of the verification Certificate (c) Adding image of Director signed document to farm/system/verification information			✓			Tasks in a task template are configurable. A user may customize the contents of each reminder including who it is assigned to and the contents of the task, including all the tasks in this specification.
130.2.1	Minimal information for a contact must include: (a) First name (b) Last name (c) One or more forms of contact (email, phone, mailing address)			✓			The MAEAP Solution will ensure that contacts have at least the first and last name and one form of contact (email, phone, mailing address).

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Business Specification Number	Business Specification	Current Capability	Requires Configuration	Customization to Software	Future Enhancement	Not Available	Contractor must comply with how they will deliver the business Specification. Contractor must meet the details of any configuration/customization and the impacted risk that may be caused if configured/customized to meet the business specification.
Data Accessibility							
131.0	The solution must allow for data administrative access to the complete data tables at the database tier-level for on demand data extracts (e.g. support data extracts for research, analysis, data warehouse loads, etc.			✓			A read-only ODBC connection, with accompanied firewall rules to limit access to authorized networks, will be granted to the database to allow for sourcing of on-demand data extracts used for the types of activities listed in this specification.

SCHEDULE B
Pricing

1.   Price proposals must include <u>all</u> costs for the implementation, licensing, and ongoing support of the Solution. Pricing schedule as follows:

- <u>Implementation Services</u>. Contractor must comply with all costs associated with implementation services (e.g. configuration, migration, integration, testing and training). All costs must be on a fixed-fee basis, and must correspond to the relevant milestones set forth in the Milestones and Deliverables Section of **Schedule A – Statement of Work**.

Mandatory and Required Services
Note that for final acceptance, all mandatory, required, and agreed to optional requirements must be met.

Payment Point	Milestone Event	Associated Milestone Deliverable(s)	Estimated Invoice Month	Cost	
1	Project Planning	Project Kickoff Meeting and Meeting Notes	February 2020	$84,146.40	
		Approval of SUITE Tailoring	February 2020	$0.00	
		Detailed Project Plan	February 2020	$0.00	$84,146.40
2	Requirements and Design Validation	Validation Sessions	April 2020	$50,487.84	
		Final Requirements Validation and Gap Analysis	May 2020	$25,243.92	
		Final Design Document	May 2020	$42,073.20	
		Implementation Plan	May 2020	$0.00	
		Transition Plan	May 2020	$0.00	
		Product Backlog	May 2020	$50,487.84	$168,292.80
3	Provision Environments	Validate Development Environment	April 2020	$5,048.64	
		Validate Test Environment	May 2020	$3,365.86	
		Validate Training Environment	May 2020	$3,365.86	
		Validate Production Environment	May 2020	$5,048.78	$16,829.14
4	By Sprint – R1	R1S01	May 2020	$82,743.97	
		R1S02	May 2020	$82,743.97	
		R1S03	June 2020	$82,743.97	
		R1S04	June 2020	$82,743.97	
		R1S05	July 2020	$82,743.96	
		R1S06	July 2020	$82,743.96	
		R1S07	August 2020	$82,743.96	
		R1S08	August 2020	$82,743.96	
		R1S09	September 2020	$82,743.96	
		R1S10	September 2020	$82,743.96	
		R1S11	October 2020	$82,743.96	
		R1S12 and Release 1 Acceptance	October 2020	$82,743.96	$992,927.56
5	By Release – R1	Training Plans	December 2020	$50,487.84	

Payment Point	Milestone Event	Associated Milestone Deliverable(s)	Estimated Invoice Month	Cost	
		Training Materials	December 2020	$50,487.84	
		Release Plan	December 2020	$50,487.84	
		Training	December 2020	$84,146.40	
		Release Acceptance	December 2020	$100,975.68	
		Code Delivery to SOM	December 2020	$0.00	$336,585.60
6	Post Production Warranty	Maintenance and Support (free of charge) of Break/Fix and/or Documented Bugs	January 2021	$0.00	
		Final Test Results Report	January 2021	$0.00	
		Final Training Documentation	January 2021	$25,243.92	
		Final Acceptance	January 2021	$29,451.24	
		End to End Training (if applicable)	January 2021	$29,451.24	$84,146.40
7	Completion of Warranty Support Services	Post Warranty Final Acceptance	April 2021	$186,992.10	$186,992.10
		DDI Subtotal			**$1,869,920.00**

The Contractor will only invoice once a month.

Optional Training Requirements
Contractor comply with the payment points and associated milestones and deliverables.

Section 16 Training Services of the Contractor includes a statement the State would prefer cost options for holding CTAI Technician and Non-CTAI Technician trainings in the northern Lower Peninsula. For CTAI Technician training in the northern Lower Peninsula, the anticipated number of participants is 15, which will require one training session. For Non-CTAI Technician training in the northern Lower Peninsula, the anticipated number of participants is 65. As the Contractor has found limiting class sizes to no more than 25 trainees improves learning outcomes, the Non-CTAI Technician training will require three sessions, with each session up to 25 trainees. Prior to the production implementation of the MAEAP Solution, the Contractor will schedule and conduct the requested northern lower peninsula training sessions, over the course of one business week at a single location to be mutually agreed upon by the Contractor and MDARD. The optional northern Lower Peninsula training will be provided by the Contractor free of charge.

Post implementation ongoing training services can be provided on a time-and-materials basis, per the Rate Card. For estimation purposes, the Contractor believes the following resources would be needed for creating the content and performing a 1-day training. Subsequent trainings using the same materials would allow for cost savings.

Position	Rate	Estimated Hours	Estimated Cost
• Technical Lead	$140/hr	12	$1,680.00
• Trainer	$120/hr	24	$2,880.00
• **Total**			**$4,560.00**

Warranty
Note that the warranty period does not begin until the State has accepted the production

implementation of the final release and that warranty costs for day 1-90 will be accounted for in the payment points above.

Warranty Period	Cost
Day 91-180	$62,500.00
Day 181-270	$62,500.00
Day 271-365	$62,500.00
Total	**$187,500.00**

Optional Support and Maintenance.
To be negotiated at a later date.

Rate Card
Fixed-price hourly-rate card for ancillary professional services (e.g. future enhancements configuration services) broken down by role (e.g. Solution design architect).

Rate Card	
Service	**Rate Per Hour**
Business Analyst	$115
Business Analyst Lead	$140
Contract Administrator	$150
Consultant	$200
Data Architect	$140
Database Administrator/Developer	$125
Developer/Programmer	$115
Geographic Information System (GIS) Developer	$140
Project Manager	$150
Quality Analyst	$125
Quality Analyst Test Lead	$130
Security Officer	$140
Senior Consultant	$225
Service Manager	$130
Technical Lead	$140
Technical/Workflow Architect	$140
Training Lead	$130

The parties agree as follows:

1.   Definitions. For purposes of this Schedule, the following terms have the meanings set forth below. All initial capitalized terms in this Schedule that are not defined in this **Section 1** to this Schedule shall have the respective meanings given to them in the Contract.

"**Contact List**" means a current list of Contractor contacts and telephone numbers set forth in the attached **Exhibit 1** to this Schedule to enable the State to escalate its Support Requests, including: (a) the first person to contact; and (b) the persons in successively more qualified or experienced positions to provide the support sought.

"**Critical Service Error**" has the meaning set forth in the Service Level Table.

"**Error**" means, generally, any failure or error referred to in the Service Level Table.

"**First Line Support**" means the initial identification, diagnosis and correction of Errors by Contractor.

"**High Service Error**" has the meaning set forth in the Service Level Table.

"**Low Service Error**" has the meaning set forth in the Service Level Table.

"**Medium Service Error**" has the meaning set forth in the Service Level Table.

"**Resolve**" and the correlative terms, "**Resolved**", "**Resolving**" and "**Resolution**" each have the meaning set forth in **Section 3.4**

"**Service Credit**" has the meaning set forth in **Section 4.1**

"**Second Line Support**" means the identification, diagnosis and correction of Errors by the provision of (a) telephone and email assistance by a qualified individual on the Contact List and remote application support, or (b) on-site technical support at the State's premises by a qualified individual on the Contact List.

"**Service Levels**" means the defined Error and corresponding required service level responses, response times, Resolutions and Resolution times referred to in the Service Level Table.

"**Service Level Table**" means the table set out in **Section 3.4**

"**State Systems**" means the State's information technology infrastructure, including the State's computers, software, databases, electronic systems (including database management systems) and networks.

"**Support Hours**" means 8 a.m. to 5 p.m. Monday through Friday, Eastern time.

"**Support Period**" means the period of time beginning 90 days after the date the Software has entered full production mode and ending on the date the Contract expires or is terminated.

"**Support Request**" has the meaning set forth in **Section 3.2**.

2. Maintenance.

2.1 <u>Maintenance Releases and New Versions</u>. During the Support Period, Contractor shall provide the State, at no additional charge, with all maintenance releases and new versions for the Software as requested by the State.

2.2 <u>Documentation</u>. Contractor shall provide the State, at no additional charge, adequate Documentation for the maintenance release or new version, which has been developed and tested by Contractor, and Accepted by the State.

3. Support Services. Contractor shall perform all First Line Support and Second Line Support and other Support Services during the Support Hours throughout the Support Period in accordance with the terms and conditions of this Schedule and the Contract, including the Service Levels and other Contractor obligations set forth in this **Section 3**.

3.1 <u>Support Service Responsibilities</u>. Contractor shall:

(a) provide unlimited telephone support during all Support Hours;

(b) respond to and Resolve all Support Requests in accordance with the Service Levels;

(c) provide unlimited remote Second Line Support to the State during all Support Hours;

(d) provide on-premise Second Line Support to the State if remote Second Line Support will not Resolve the Error; and

(e) provide to the State all such other services as may be necessary or useful to correct an Error or otherwise fulfill the Service Level requirements, including defect repair, programming corrections and remedial programming.

3.2 <u>Support Requests</u>. The State may request Support Services by way of a Support Request. The State shall classify its requests for Error corrections in accordance with the support request classification and definitions of the Service Level Table set forth in **Section 3.2** (each a "**Support Request**"). The State shall notify Contractor of each Support Request by e-mail or telephone. The State shall include in each Support Request a description of the reported Error and the time the State first observed the Error.

3.3 <u>State Obligations</u>. The State shall provide the Contractor with each of the following to the extent reasonably necessary to assist Contractor to reproduce operating conditions similar to those present when the State detected the relevant Error and to respond to and Resolve the relevant Support Request:

(i) if not prohibited by the State's security policies, remote access to the State Systems, and if prohibited, direct access at the State's premises;

(ii) output and other data, documents and information, each of which is deemed the State's Confidential Information as defined in the Contract; and

(iii)   such other reasonable cooperation and assistance as Contractor may request.

3.4   <u>Service Level Table</u>. Response and Resolution times will be measured from the time Contractor receives a Support Request until the respective times Contractor has (a) responded to that Support Request, in the case of response time and (b) Resolved that Support Request, in the case of Resolution time. "**Resolve**", "**Resolved**", "**Resolution**" and correlative capitalized terms mean, with respect to any particular Support Request, that Contractor has corrected the Error that prompted that Support Request and that the State has confirmed such correction and its acceptance of it in writing. Contractor shall respond to and Resolve all Support Requests within the following times based on the State's designation of the severity of the associated Error, subject to the parties' written agreement to revise such designation after Contractor's investigation of the reported Error and consultation with the State:

Support Request Classification	Definition	Service Level Metric (Required Response Time)	Service Level Metric (Required Resolution Time)
Critical Service Error	(a) Issue affecting entire Software system or single critical production function; (b) Software down or operating in materially degraded state; (c) Data integrity at risk; (d) Material financial impact; (e) Widespread access interruptions: or (f) Classified by the state as a Critical Service Error	Contractor shall acknowledge receipt of a Support Request within thirty (30) minutes.	Contractor shall Resolve the Support Request as soon as practicable and no later than four (4) hours after Contractor's receipt of the Support Request. If the Contractor Resolves the Support Request by way of a work-around accepted in writing by the State, the support classification assessment will be reduced to a High Service Error.
High Service Error	(a) A Critical Service Error for which the State has received, within the Resolution	Contractor shall acknowledge receipt of a Support Request or, where applicable,	Contractor shall Resolve the Support Request as soon as practicable and no

	time for Critical Service Errors, a work-around that the State has accepted in writing; or (b) Primary component failure that materially impairs Software's performance; (c) Data entry or access is materially impaired on a limited basis; or (d) performance issues of severe nature impacting critical processes	the State's written acceptance of a Critical Service Error work-around, within twenty-four (24) hours.	later than two (2) Business Days after Contractor's receipt of the Support Request or, where applicable, the State's written acceptance of a Critical Service Error work-around.
Medium Service Error	An isolated or minor Error in the Software that meets any of the following requirements: (a) does not significantly affect Software functionality; (b) can or does impair or disable only certain non-essential Software functions; or (c) does not materially affect the State's use of the Software	Contractor shall acknowledge receipt of the Support Request within two (2) Business Days.	Contractor shall Resolve the Support Request as soon as practicable and no later than ten (10) Business Days after Contractor's receipt of the Support Request.

3.5   Escalation to Parties' Project Managers. If Contractor does not respond to a Support Request within the relevant Service Level response time, the State may escalate the Support Request to the parties' respective Project Managers and then to their respective Contract Administrators.

3.6   Time Extensions. The State may, on a case-by-case basis, agree in writing to a reasonable extension of the Service Level response or Resolution times.

3.7   Contractor Updates. Contractor shall give the State monthly electronic or other written reports and updates of:

(a)   the nature and status of its efforts to correct any Error, including a description of the Error and the time of Contractor's response and Resolution;

(b)   its Service Level performance, including Service Level response and Resolution times; and

(c)   the Service Credits to which the State has become entitled.

4.   Service Credits.

4.1   Service Credit Amounts. If the Contractor fails to respond to a Support Request within the applicable Service Level response time or to Resolve a Support Request within the applicable Service Level Resolution time, the State will be entitled to the corresponding service credits specified in the table below ("**Service Credits**"), provided that the relevant Error did not result from a State Cause.

Support Request Classification	Service Level Credits (For Failure to Respond to any Support Request Within the Corresponding Response Time)	Service Level Credits (For Failure to Resolve any Support Request Within the Corresponding Required Resolution Time)
Critical Service Error	An amount equal to 5% of the then current monthly Support Fee for each hour by which Contractor's response exceeds the required Response time.	An amount equal to 5% of the then current monthly Support Fee for each hour by which Contractor's Resolution of the Support Request exceeds the required Resolution time.
High Service Error	An amount equal to 3% of the then current monthly Support Fee for each Business Day, and a pro-rated share of such percentage for each part of a Business Day, by which Contractor's response exceeds the required Response time.	An amount equal to 3% of the then current monthly Support Fee for each Business Day, and a pro-rated share of such percentage for each part of a Business Day, by which Contractor's Resolution of the Support Request exceeds the required Resolution time.

4.2   Compensatory Purpose. The parties intend that the Service Credits constitute compensation to the State, and not a penalty. The parties acknowledge and agree that the State's harm caused by Contractor's delayed delivery of the Support Services would be impossible or very difficult to accurately estimate as of the Effective Date, and that the Service Credits are a reasonable estimate of the anticipated or actual harm that might arise from Contractor's breach of its Service Level obligations.

4.3   Issuance of Service Credits. Contractor shall, for each monthly invoice period, issue to the State, together with Contractor's invoice for such period, a written acknowledgment setting forth all Service Credits to which the State has become entitled during that invoice period. Contractor shall pay the amount of the Service Credit as a debt to the State within fifteen (15) Business Days of issue of the Service Credit acknowledgment, provided that, at the State's option, the State may, at any time prior to Contractor's payment of such debt, deduct the Service Credit from the amount payable by the State to Contractor pursuant to such invoice.

4.4   Additional Remedies for Service Level Failures. Contractor's repeated failure to meet the Service Levels for Resolution of any Critical Service Errors or High Service Errors, or any combination of such Errors, within the applicable Resolution time set out in the Service Level Table will constitute a material breach under the Contract. Without limiting the State's right to receive Service Credits under this **Section 4**, the State may terminate this Schedule for cause in accordance with terms of the Contract.

5.   Communications. In addition to the mechanisms for giving notice specified in the Contract, unless expressly specified otherwise in this Schedule or the Contract, the parties may use e-mail for communications on any matter referred to herein.