

**SECOND AMENDMENT TO AGREEMENT
FOR
PROFESSIONAL SERVICES BETWEEN
MICHIGAN STATE HOUSING DEVELOPMENT AUTHORITY
AND
NAN MCKAY AND ASSOCIATES, INC.**

THIS SECOND AMENDMENT OF AGREEMENT FOR PROFESSIONAL SERVICES ("Second Amendment"), made and entered into as of **December 21, 2019**, by and between the MICHIGAN STATE HOUSING DEVELOPMENT AUTHORITY ("Authority"), and NAN MCKAY AND ASSOCIATES, INC ("Contractor"). The Authority and the Contractor in this Second Amendment are collectively referred to as the "Parties".

WITNESSETH:

WHEREAS, the Parties entered into Professional Services Contract No. 19-45-HCV dated December 30, 2019 ("Contract"), whereby the Contractor agreed to provide Commercial off the Shelf (COTS) Software as a Service (SaaS) services related to the Authority's Housing Choice Voucher Program (HCV), Rent Reasonableness (RR) services and the Michigan Housing Locator (MHL) lending programs and activities as more particularly set forth in the Contract.

NOW THEREFORE, the Parties mutually agree to amend the terms of the Contract as follows:

- A. Section 2 is hereby replaced in its entirety with the following:
 - 2. Term. TIME IS OF THE ESSENCE to this Agreement in connection with the delivery of the products or services or both ("Products and Services") described in the Scope of Work attached and incorporated into this Agreement as Exhibit A. The performance of Products and Services shall begin on or after the execution of this Agreement by the Authority and shall be completed no later than December 31, 2023. At its discretion, the Authority may extend this Agreement for up to two one-year periods.
- B. Section 3(a) is hereby replaced in its entirety with the following:
 - 3. **Contract.** Price and Payment.
 - a. The total amount to be paid by the Authority to the Contractor under this Agreement shall not exceed **Two Hundred One Thousand Five Hundred Dollars (\$281,500.00)**.

This Second Amendment may be executed by separate counterparts, which taken together shall constitute a single executed amendatory instrument.

IT IS LASTLY AGREED by and between the Parties that the Contract 19-45-HCV executed on December 21, 2019, excepting the portions amended hereby, together with this amendatory instrument and the revised provisions herein, constitute the entire agreement of the Parties and that, except as expressly modified in this Second Amendment, the terms and conditions expressed within the original Contract 19-45-HCV executed on December 21, 2019, will remain in full force and effect.

NAN MCKAY AND ASSOCIATES, INC.

By: John McKay
John McKay, Chief Executive Officer

MICHIGAN STATE HOUSING DEVELOPMENT AUTHORITY

By: Gary Heidel
Gary Heidel, Acting Executive Director



STATE OF MICHIGAN

GRETCHEN WHITMER
GOVERNOR

MICHIGAN STATE HOUSING DEVELOPMENT AUTHORITY
LANSING

GARY HEIDEL
ACTING EXECUTIVE DIRECTOR

PROCUREMENT OFFICE

Professional Services Contract Amendment

Contractor: Nan McKay And Associates, Inc

Amendment #: 1 Contract #: 19-45-HCV Effective Date: December 1, 2019

Purpose of Amendment:

☐ Original Contract Amount \$_____ Amendment One Increase \$_____
Amendment Two Increase: \$_____ New Contract Amount: \$_____
(Amends Contract Exhibit II)

☐ Contract Term or Period Change
from _____ to _____
(Amends Contract Section 2 and Exhibit Section 1B)

☐ Change in Contract Number
from _____ to _____

☒ Change in Payment to Contractor: (See attached revision.)
(Amends Exhibit B of the Professional Services Contract)

APPROVED BY:

NAN MCKAY AND ASSOCIATES, INC

DocuSigned by:

John McKay

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John McKay, CEO

MICHIGAN STATE HOUSING DEVELOPMENT AUTHORITY

Gary Heidel

Gary Heidel, Acting Executive Director

EXHIBIT B COST TABLES

Presented below is the NMA team's proposed pricing. Note that any customizations or enhancements to the software will be charged at an hourly rate of \$125.00.

Description	Year 1	Year 2	Year 3	Option 1	Option 2	Option 3
Implementation	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Licensing	\$66,000 \$70,000	\$68,500 \$72,000	\$71,000 \$74,000	\$73,500 \$76,000	\$76,000 \$78,000	\$78,500 \$80,000
Support & Maintenance	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Onsite Technical Professional Services	\$175.00	\$175.00	\$175.00	\$175.00	\$175.00	\$175.00
Remote Technical Services	\$125.00	\$125.00	\$125.00	\$125.00	\$125.00	\$125.00
Initial Live Training & Unlimited Web-Based Training	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

CONTRACT NO. 19-45-HCV

MICHIGAN STATE HOUSING DEVELOPMENT AUTHORITY

AGREEMENT FOR PROFESSIONAL SERVICES

WITH

NAN MCKAY AND ASSOCIATES, INC

THIS AGREEMENT is made and entered into as of the **30th day of December 2019**, by and between the **MICHIGAN STATE HOUSING DEVELOPMENT AUTHORITY**, a public body corporate and politic, located at 735 E. Michigan Avenue, Lansing, Michigan 48912 ("**Authority**" or "**MSHDA**") and **NAN MCKAY AND ASSOCIATES, INC** a Corporation, located at 1810 Gillespie Way, Suite 202, El Cajon, CA 92020, ("**Contractor**") for the purpose of providing the Authority with a Commercial off the Shelf (COTS) Software as a Service (SaaS) for Michigan State Housing Development Authority's (MSHDA) – Housing Choice Voucher Program (HCV) – Rent Reasonableness (RR) services and the Michigan Housing Locator (MHL). (**The Authority and the Contractor are collectively referred to as the "Parties"**).

WITNESSETH THAT:

The Authority and the Contractor do mutually agree as follows:

1. **Services Rendered/Scope of Work.** The Contractor shall, in a satisfactory and proper manner as determined by the Authority, render the services described in Exhibit A, which is attached and made a part of this Agreement.
2. **Term.** TIME IS OF THE ESSENCE to this Agreement in connection with the delivery of the products or services or both ("Products and Services") described in the Scope of Work attached and incorporated into this Agreement as Exhibit A. The performance of Products and Services shall begin on or after the execution of this Agreement by the Authority and will be Three (3) years, with Three (3) one-year options.
3. **Contract. Price and Payment.**
 - a. The total amount to be paid by the Authority to the Contractor under this Agreement shall not exceed **Two Hundred Five Thousand, Five Hundred Dollars. (\$205,500.00).**
 - b. Work rates shall not exceed those as provided in Exhibit B entitled "Cost Tables" attached and incorporated into this Agreement. Out-of-pocket expenses are to be reimbursed at the regular per diem rate and Authority policy in effect when Products and Services are rendered.
 - c. Payment will be made upon presentation of invoices submitted periodically for work performed. Invoices should be submitted to the Procurement, Attn: Joe Kelly, 735 E. Michigan Ave., Lansing, MI 48912 or MSHDA-Procurement@michigan.gov and must include the following:
 - i. The Authority's contract number as shown above.

- ii. Specific service performed and development/unit name and number, if applicable.
- iii. Amount paid to date on this Agreement itemized by monthly expenditures and total expenditures to date.
- iv. Number and amount of this invoice.
- v. Division for whom services were performed.
- vi. Name of point of contact for services that were performed.
- vii. Contractor staff member(s) and their hourly rate(s) who performed the services being invoiced.

Final payment shall be made upon the satisfactory completion and submission of all required work and documents.

- d. **WORK PERFORMED OR PROVIDED PRIOR TO THE TERMS OF THIS AGREEMENT SHALL NOT BE ELIGIBLE FOR PAYMENT.**

- 4. **Permits and Licenses.** The Contractor shall be responsible for obtaining any and all permits, licenses, and other proper authorization or permission-related documents required for the performance of this Agreement.
- 5. **Insurance.** 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 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 a company with an A.M. Best rating of "A" or better, and a financial size of VII or better.

Required Limits	Additional Requirements
Commercial General Liability Insurance	
<u>Minimal Limits:</u> \$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 <u>Deductible Maximum:</u> \$50,000 Each Occurrence	Contractor must have their policy endorsed to add "the Michigan State Housing and Development Authority, its, 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 0.
Workers' Compensation Insurance	
<u>Minimal Limits:</u> Coverage according to applicable laws governing work activities.	Waiver of subrogation, except where waiver is prohibited by law.
Employers Liability Insurance	
<u>Minimal Limits:</u> \$500,000 Each Accident \$500,000 Each Employee by Disease \$500,000 Aggregate Disease.	
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	

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 performance of Scope of Work; (b) maintain coverage and provide evidence of coverage for at least three (3) years after completion of the Contract Activities; and (c) if coverage is canceled or not renewed, and not replaced with another claims-made policy form with a retroactive date prior to the contract effective date, Contractor must purchase extended reporting coverage for a minimum of three (3) years after completion of work.

Contractor must: (a) provide insurance certificates to the Contract Administrator (see Section 11 below), containing the agreement or purchase order number, at Contract formation and within 20 calendar days of the expiration date of the applicable policies; (b) require that subcontractors maintain the required insurances contained in this Section; (c) notify the Contract Administrator within 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.

This Section 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 Agreement (including any provisions hereof requiring Contractor to indemnify, defend and hold harmless the State).

6. **Record Keeping.** The Contractor and the Authority shall maintain such personnel records as are deemed necessary by the Authority to assure a proper account for all engagement costs. These records will be made available for audit purposes to the Authority and the Auditor General of the State of Michigan, or any authorized representative, and will be retained for three years after the expiration of the Agreement unless permission to destroy them is granted by both the Authority and the State of Michigan.
7. **Reports.** The Contractor shall promptly submit to the Authority's **Contract Administrator**/designated project representative (see Section 11) any reports prescribed in Exhibit A attached and incorporated into this Agreement. Such reports shall include but not be limited to: progress reports, a report of all receipts, expenditures, project activities and accomplishments, including a comparison of the final budget to the approved Project

Budget, Exhibit B attached and incorporated into this Agreement, and supporting documentation for claimed reimbursements. The Authority shall prescribe the requisite form and content of reports and shall designate the dates on which the reports are to be submitted by the Contractor and subcontractor. Before the occurrence of the project completion date prescribed in Section 2 of this Agreement, the Contractor shall submit to the Authority both a project completion report and a proper final claim for expenditure reimbursement, which shall be supported by documentation of the expenditures claimed.

In addition to the project completion report and other submissions, the Contractor shall submit to the Authority a quarterly progress report in the form and containing the completion material prescribed by the Authority for that project period for each quarter this Agreement is in effect. If required, quarterly reports shall be submitted not later than as outlined in the Performance Schedule, Exhibit A attached and incorporated into this Agreement.

8. **Nondiscrimination.** In accordance with Acts No. 220 and 453 of the Public Acts of 1976, as amended, the Contractor hereby agrees in connection with the performance of Products and Services under this Agreement not to discriminate against an employee or applicant for employment with respect to hire, tenure, terms, conditions, privileges of employment, or a matter directly or indirectly related to employment because of race, color, religion, national origin, age, sex, height, weight, marital status, familial status, or disability. Breach of this covenant may be regarded as a material breach of this Agreement.
9. **Failure to Perform.** In the event the Contractor fails to perform Products and Services required under this Agreement or performs Products and Services in an improper manner,

the Parties agree that the damage that the Authority will sustain as a result thereof will be substantial and difficult, if not impossible, to ascertain. Therefore, the Parties agree that in the event the Contractor either fails to completely perform Products and Services or performs Products and Services in an improper manner, the Authority shall be entitled to a credit against the Contractor's current unpaid billings for amounts previously paid to the Contractor after the Contractor's non-performance or improper performance. For the purposes of the foregoing, the Parties agree that the Authority shall have sole discretion in determining the adequacy of the Contractor's performance and the amount of credit to be taken. The damages for the Contractor's inadequate or improper performance, as provided in this Agreement, shall not be exclusive but shall be in addition to any other damages which the Authority may be entitled to for the Contractor's default under this Agreement.

10. **Assigned Personnel.** The Contractor warrants that the personnel it will assign to perform the Products and Services under this Agreement shall possess the requisite education, competence and experience. The Contractor further acknowledges and agrees that such personnel may be subject to the evaluation and approval of the Authority, who shall retain the right to determine the sufficiency of the education, competence and experience of the personnel assigned to perform the Products and Services identified in Exhibit A attached and incorporated into this Agreement.
11. **Project Representatives.** The Contractor designates the following individual as project representative for all matters concerning this Agreement:

John McKay CEO
Nan McKay and Associates
1810 Gillespie way
El Cajon, CA 92020
Phone: 800-783-3100
Email: john@nanmckay.com

The Authority designates the following individual as **Contract Administrator**/project representative to be the initial point of contact for all matters concerning this Agreement:

Joe Kelly, Buyer
MSHDA Procurement
735 E. Michigan Ave., Lansing, MI 48912
Phone: 517-256-1873
Fax: 517-335-0125
MSHDA-Procurement@michigan.gov

Except for changes to the performance schedule (not including the project's completion date), the designated project representatives shall have no authority to make promises or binding obligations on behalf of the Authority, as such authority rests with the duly authorized persons executing this Agreement.

12. **Employees of Contractor or Key Persons.**

- a. Definition of Key Person. **"Key Persons"** shall be defined in this Agreement as individuals performing the Products and Services pursuant to this Agreement and (a) have signed this Agreement on behalf of the Contractor and/or (b) are listed in Exhibit C, attached and incorporated into this Agreement. Key Persons include the names of all employees, agents and independent contractors of the Contractor who perform or render Products and Services pursuant to this Agreement.
- b. Performance of Products and Services. The Contractor acknowledges that only Key Persons shall perform the Products and Services under this Agreement.
- c. Exhibit – D Certificate Verifying Key Persons. Prior to executing this Agreement, the Contractor shall provide to the Authority the names of all Key Persons by completing Exhibit D, which is the Certificate Verifying Key Persons of the Contractor or a Subcontractor, if applicable ("Certificate"). In the event the Contractor fails to provide to the Authority the names of any Key Persons, the

Parties shall consider the signatory for the Contractor to be the sole Key Person for the Contractor. **If the Contractor (or Subcontractor) wishes to add an agent, employee, or independent contractor as a Key Person during the term of this Agreement, the Contractor shall complete and submit to the Authority an additional or revised Certificate for that employee, agent, or independent contractor.** (See Section 12a of this Agreement.)

- d. 2007 PA 95, MCL 38.68c. The Contractor and its employees, agents, and independent contractors acknowledge 2007 PA 95, MCL 38.68c, as amended, requires retirees of the State Employees Retirement System (i.e., former state employees who have pensions with the State of Michigan) (“Pensioned Retirees”) who become employed by the State, either directly or indirectly through a contractual arrangement with another party, on or after October 1, 2007, to forfeit their state pension for the duration of their reemployment. Effective October 2, 2010, “employed by the state” includes engagements of pensioned retirees as independent contractors.

Pensioned retirees who provide or render Products and Services under this Agreement as key persons must forfeit their pensions during the term of this Agreement if the pensioned retiree (a) is employed by the State, (b) is employed by the Contractor, (c) is a holder of an ownership interest in the Contractor, (d) is a subcontractor of the Contractor, or (e) is an employee of a subcontractor.

The Contractor acknowledges and agrees to secure the Authority’s prior written consent before retaining, employing or subcontracting with a pensioned retiree to perform Products and Services under this Agreement. Retaining, employing or

subcontracting with a pensioned retiree to perform Products and Services under this Agreement without the Authority's prior written consent shall be (a) a material breach of this Agreement and (b) grounds for the Authority to terminate this Agreement and provide notice to the Office of Retirement Services that the retiree has received pension payments and payments directly or indirectly through this Agreement.

If the Contractor employs or retains a pensioned retiree as a key person or subcontracts with a pensioned retiree, the Contractor must submit a copy of the pensioned retiree's directions to the Office of Retirement Services ("ORS"), identified as Exhibit D attached and incorporated into this Agreement, to withhold the retiree's pension payments during the term of this Agreement.

The Contractor and the pensioned retirees it employs acknowledge and agree that neither the State, nor the Authority, nor its employees, directors, agents nor board shall be liable to the Contractor or pensioned retiree for the forfeiture of the retiree's pension payments during or after the term of this Agreement. The Contractor and pensioned retiree acknowledge that the Authority has no responsibility to confirm whether the ORS has or will forfeit the retiree's pension.

13. **Conflicts of Interest.** The Contractor acknowledges that its employees, members, shareholders, agents, or independent contractors, or subcontractors and their employees, members, shareholders and agents, prior to or during the term of this Agreement are not employees of the State of Michigan or its units. Prior to the execution of this Agreement,

the Contractor acknowledges and confirms that it has delivered to the Authority a written list of all interests of the Contractor, or its officers and employees, which may create conflicts between the interests of those entities or parties and the interests of the Authority. Should a constructive or actual conflict of interest arise during the term of this Agreement, the Contractor shall contact the Authority's Director of Legal Affairs immediately and describe in detail the conflict of interest.

14. **Prohibited Methods and Procedures.** The Contractor and its agents, subcontractors, employees, and representatives, in the course of the performance of Products and Services under this Agreement, shall not specify, recommend, use, or permit the use of any system, method, plan, design, process, procedure, patent, or copyright which, if used, infringes upon a proprietary interest or necessitates the payment of any royalty, fee, or commission. The Contractor shall not use or permit the solicitation for or securing of any agreement or employment in connection with this Agreement upon an agreement or arrangement for payment, either directly or indirectly, of a commission, percentage, brokerage, or contingent fee.

If Federal funds are used to pay the Contractor under this Agreement, no part of the money appropriated by any enactment of Congress shall, in the absence of express authorization by Congress, be used directly or indirectly to pay for any personal service, advertisement, telegram, telephone, letter, printed or written matter, or other device, intended or designed to influence in any manner a member of Congress, to favor or oppose, by vote or otherwise, any legislation or appropriation by Congress, whether before or after the introduction of any bill or resolution proposing such legislation or appropriation; but this shall not prevent officers or employees of the United States or of its departments or

agencies from communicating to members of Congress on the request of any member or to Congress, through the proper official channels, requests for legislation or appropriations which they deem necessary for the efficient conduct of the public business. 18 U.S.C. § 1913 (2002).

15. **Participation in Other Authority Programs.** With the exception of providing Products and Services to the Authority as described in Exhibit A of this Agreement, neither the Contractor nor the Contractor's employees, agents, officers, directors, shareholders, members or subcontractors will participate in Authority housing programs or do business with the Authority under any program in which the Authority has a direct or indirect relationship without securing approval from the Authority's Director of Legal Affairs.
16. **Indemnity and Non-Limitation. Mich. Const. art. IX, § 18.** The Contractor agrees to defend, indemnify and hold harmless the Authority from any claims, damages or expenses, including reasonable attorneys' fees, arising or alleged to arise in whole or in part from damage or injury caused by or resulting from any action or inaction of the Contractor, its agents or employees, or sustained in connection with the violation of any law, statute, ordinance or regulation by the Contractor, its agents or employees, or sustained in connection with the performance of this Agreement by the Contractor, its agents or employees, or sustained as a result of any breach of this Agreement by Contractor.

In any and all claims against the Authority or any of its officers, agents, or employees by an employee of the Contractor, any subcontractor, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, the indemnification obligation under this section shall not be limited in any way by any limitation in the amount

or type of damages, compensation, or benefits payable by or for the Contractor or by or for any subcontractor under worker's compensation acts, disability benefit acts, or other employee benefit acts.

17. Nonassignability and Delegation.

a. The Contractor shall not assign or otherwise transfer any interest in this Agreement or in the project in any manner not provided for in this Agreement.

b. The Contractor shall not delegate any duties or obligations under this Agreement to a subcontractor or independent contractor unless the Authority's Contract Administrator and Director of Legal Affairs has given written consent to the delegation. When submitting the request to subcontract, the Contractor shall include the following information about the subcontractor:

- i. **Name of Subcontracting Firm;**
- ii. **Work that will be subcontracted;**
- iii. **Names of individuals who will perform the subcontracted work;**
 - iv. **Subcontractors project representative and/or Key Person (See Section 12); and**
 - v. **List any and all Authority programs through which the subcontractor or the subcontractor's employees, officers, directors, members, shareholders or officeholders participate.**

c. In the event the Contractor retains a subcontractor in accordance with Section 17b above, the Contractor shall insert into each subcontract executed in connection with this Agreement appropriate and enforceable provisions requiring compliance with this Agreement by the subcontractor and the persons acting for it. Throughout the performance of any subcontracts, the Contractor shall monitor and verify the compliance of all subcontractors and persons acting for them and shall immediately take any affirmative or remedial measures prescribed by the Authority or otherwise deemed necessary in the opinion of the Contractor for enforcing compliance under such subcontracts.

d. **Delegation of duties or obligations under this Agreement to a**

subcontractor or independent contractor without the prior written consent of the Authority's Contract Administrator or Director of Legal Affairs shall be a material breach of this Agreement. In the event a subcontractor is approved by the Authority's Contract Administrator and Director of Legal Affairs, the Key Persons for the subcontractor shall be subject to the requirements set forth in Section 12 (Employees of Contractor or Key Persons) of this Agreement, including, but not limited to, the restrictions on pension payments if a pensioned retiree is a Key Person of the subcontractor or an independent contractor retained by the Contractor.

Subcontracting work to be performed under this Agreement without the prior written consent of the Authority's Contract Administrator and Director of Legal Affairs shall be a material breach of this Agreement.

18. **Suspension and Debarment.** Pursuant to 1980 PA 278; MCL 423.322 *et seq.*, the Contractor, in performing this Agreement, shall not enter into a contract with a subcontractor, manufacturer, or supplier whose name has been listed in the register maintained by the State of Michigan, Department of Licensing and Regulatory Affairs, of employees who have been found in contempt of court by a federal court of appeals, on not less than three occasions involving different violations during the preceding seven years, for failing to correct an unfair labor practice as prohibited by Section 8 of Chapter 372 of the National Labor Relations Act, 29 U.S.C § 158.

The Authority may void this Agreement if the name of the Contractor or the name of a subcontractor, manufacturer, or supplier used by the Contractor in performing this Agreement subsequently appears in the register during the period of this

Agreement.

The Contractor certifies, by signing this Agreement, that it possesses business integrity and that neither it nor any of its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in grants or contracts by any federal, state, or local department or agency.

The suspension of the Contractor by the State of Michigan, an agency of the State or a department of the Federal Government, shall be at the option of the Authority, a material breach and grounds for the immediate termination of this Agreement.

19. **Independence of Contractors.** The Authority shall retain the Contractor as an independent contractor, and the Contractor hereby accepts such independent contractor relationship, upon the terms and conditions set forth in this Agreement. Nothing in this Agreement shall be construed to create the relationship of employer and employee between the Authority and the Contractor or any of its employees or agents. **The Contractor, its employees and subcontractors, shall be deemed at all time and for all purposes to be independent contractors.** The Contractor acknowledges and agrees that all payments by the Authority to the Contractor shall be made without deduction for federal, state or local income taxes, social security taxes and similar items, and that the Contractor shall be solely responsible to report income under this Agreement to the Internal Revenue Service and other appropriate taxing authorities and to pay such taxes (including, without limitation, being solely responsible to make periodic estimated payments of such taxes in accordance with applicable law). The Contractor further acknowledges and agrees that all payments under this Agreement to the Contractor by

the Authority shall be reported to the Internal Revenue Service and other appropriate taxing authorities on Form 1099 (or equivalent or replacement forms). Finally, the Authority acknowledges that the manner and means of producing the Products and Services described in Exhibit A are under the control and at the discretion of the Contractor.

20. **Ownership of Documents, Reports and Other Products.** All documents, reports and any other products developed and/or delivered to the Authority under this Agreement shall become and be the property of the Authority.
21. **Disclosure of Information.** Other than as contemplated by this Agreement, the Contractor, its agents, and subcontractors, without the prior consent of the Authority shall not:
 - a. disclose information or documents created or maintained in connection with this Agreement to anyone;
 - b. use information or documents created or maintained in connection with this Agreement to further any private interest.

Use or disclosure of documents or information without the prior written consent of an authorized officer of the Authority shall be a material breach of this Agreement.

22. **Modifications.** The Authority or the Contractor may request modification of the scope of work, products, budget, or project work schedule to be performed by the Contractor. Modifications shall comport with the intent and purpose of this Agreement and shall be consistent with applicable state and federal regulations, limitations, guidelines, policies, and interpretations prescribed by the Authority pursuant to law. All requests for modification

shall be submitted in written form by the duly authorized representative, as specified in Section 11, of the party requesting modification prior to modification implementation. Failure to obtain prior approval will result in the disallowance of expenditures.

No verbal representation, understanding, agreement, or interpretation of any officer, agent, employee of the Authority or Contractor, either before or after execution of this Agreement, shall modify any of the terms of this Agreement, unless such representation, understanding, agreement, or interpretation is expressly stated in this Agreement or an amendment to this Agreement executed by both parties.

23. **Termination of Agreement.** Termination is the cancellation of this Agreement, in whole or in part, at any time prior to the date of completion.
- a. Termination for cause. The Authority may terminate this Agreement, in whole or in part, at any time before the date of completion, whenever it is determined that the Contractor has failed to comply with the terms and conditions of this Agreement. The Authority will promptly notify the Contractor in writing of the termination and the reasons for the termination, together with the effective date. Payments made to the Contractor or recoveries by the Authority under this Agreement when it is terminated for cause will be in accordance with the legal rights and liabilities of the parties.
 - b. Termination for convenience. The Authority or the Contractor may terminate this Agreement in whole or in part when the Parties agree that the continuation of the project would not produce beneficial results commensurate with the further expenditure of funds. The Parties will agree upon the termination conditions, including the effective date, and in the case of partial terminations, the portion to be

terminated. An amendment of the terms of this Agreement is required for all terminations for convenience.

- c. Termination by Contractor. At any time prior to the first payment on the Agreement, the Contractor may, with written notification to the Authority, unilaterally cancel this Agreement. Once initiated, no Product or Services financed with Authority assistance shall be terminated by the Contractor prior to satisfactory completion without approval of the Authority. After the first payment, the Product or Services may be terminated, modified, or amended by the Contractor only by mutual agreement of the Parties. Termination requests prior to completion of the Product or Services must fully explain the reasons for the action and detail the proposed disposition of the uncompleted Product or Services.

- d. Termination of Agreement for Unavailability of Authority or Federal Funds.

It is the intent and understanding of the Parties that this Agreement is contingent upon the availability of Authority or Federal funds or the receipt by the Authority of Federal funds. If Authority funds or Federal funds approved or obligated by the Authority in connection with this Agreement are at any time rendered unavailable, the Authority shall then have the right to terminate this Agreement by the giving of a written notice, the basis, and the effective date of the termination to the Contractor. Should this Agreement be terminated by reason of the unavailability of Authority or Federal funds for the purposes of this Agreement, all finished or unfinished documents, data, studies, reports, and other materials prepared by the Contractor under this Agreement prior to the effective date of the termination shall be delivered in a format specified by the Authority.

In the event of termination under this section for lack of Authority or Federal funds, the Contractor shall be entitled to receive payment for Products and Services incurred under this Agreement prior to the effective date of termination.

- e. Commitments. If this Agreement is terminated, the Contractor will not incur new obligations for the terminated portion after the effective termination date. The Contractor will at its own expense cancel any outstanding obligations. Costs incurred after the effective date of the termination will be disallowed. In the event of termination, all finished or unfinished documents, data, studies, reports, and other materials prepared by the Contractor under this Agreement prior to the effective date of termination shall become the property of the Authority. The Contractor will provide all finished and unfinished material as previously described within 30 days of terminating. However, the Contractor will be entitled to retain copies. The Contractor, in the event of termination under this provision, is entitled to receive reimbursement for Products and Services satisfactorily performed under this Agreement prior to the effective date of such termination. Notwithstanding the foregoing, the Contractor shall not be relieved of its liability to the Authority for the damages sustained by the Authority as the result of any breach of this Agreement until the Authority so releases the Contractor and has determined for the purpose of set-off the exact amount of damages due the Authority.

- 24. **Severability of Provisions.** It is declared to be the intent of the Parties that if any provision of this Agreement executed by both parties or its application to any persons or circumstances is adjudged by any court of competent jurisdiction to be invalid, the court's judgment shall not affect or invalidate the remainder of this Agreement nor its application to other persons or circumstances, unless so provided by the court or unless the severance of

the invalid provision alters the basic intent or purpose of this Agreement, would cause an increase of the Authority's financial obligation, or renders impossible the compliance with any applicable statute, regulation, limitation, guideline, policy.

25. **Michigan Law.** This Agreement shall be governed by the laws of the State of Michigan and shall be binding upon the Contractor's successors, assigns, and legal representatives. All records pertinent to this Agreement are subject to public disclosure under the Michigan Freedom of Information Act; 1976 PA 442; MCL 15.231 *et seq.* The Contractor shall insert the provisions of this section into any subcontract entered into to accomplish the terms of this Agreement.

EXHIBIT A

SCOPE OF WORK

This Exhibit identifies 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 have the respective meanings given to them in Section 1 of the Contract Terms and Conditions.

Term	Definition
Solution	Means the COTS solution

2. PURPOSE

Contract on available Commercial off the Shelf (COTS) Software as a Service (SaaS) for Michigan State Housing Development Authority's (MSHDA) – Housing Choice Voucher Program (HCV) – Rent Reasonableness (RR) services and the Michigan Housing Locator (MHL). The purpose of this request is to obtain information on a cost-effective software solution for obtaining rent reasonableness data, to have direct access to comparable data throughout Michigan, and for ongoing support, hosting, and future enhancement to the exiting MHL environment.

MSHDA is the SOM's authority that has as its mission to provide financial and technical assistance through public and private partnerships to create and preserve decent, affordable housing for low-and moderate-income Michigan residents. MSHDA acquires its funds through Federal government programs (e.g., HUD), State government programs, and private investors (e.g., through the sale of bonds), and then provides benefits through multifamily loans, tax credits, single family loans, home improvement loans, Section 8 rental assistance, HCV rental assistance, and community development grants and technical assistance programs. These benefits are generally provided through other entities, such as developers, banks, landlords, limited liability companies, and local communities and development agencies.

The HCV Program is required by the Housing and Urban Development (HUD) to conduct rent reasonableness testing on all rental property units before approving the initial move-in and when there are reported contract rent increases. A minimum of three comparable units must be identified before a unit can be approved or denied for the requested rent. The same process must be completed by MSHDA Project Based Voucher (PBV) staff for new development deals and when an existing development requests a contract rent increase.

The Asset Management Division administers the contract for the MHL website. The MHL is a market driven web-based tool for all rental properties across the SOM. The website/database provides the Michigan public with an inventory of rental housing available state-wide. Any user with an internet connection and a method to surf the web should have access to the website and its resources. Rental property information is entered, updated, and maintained by rental property owners. Alerts are provided to the account owners when property listings become outdated. If outdated properties are not updated,

the property information is removed from the website and login accounts inactivated. To further assist the public, property listings can be filtered by the user's needs and printed from the website.

In procurement of the RR services, MSHDA strives to:

- Conduct rent reasonableness testing on all units before approving the initial move-in and when there are reported contract rent increases;
- Improve business alignment with current HUD standards and processes;
- Provide easier confirmation of rent reasonableness within a geographic region;
- Reduce the risk of exposure to HUD audit findings;
- Provide MSHDA with a uniform process that may be shared across its enterprise;
- Improve accuracy of comparable data to ensure that rents paid by MSHDA's HCV Program are reasonable for the area in which the subject unit is located;
- Reduce the time spent by MSHDA staff to do research on rent values, thereby improving operational efficiencies, and;
- Provide increased data-sets and reporting tools for statewide and localized market analysis.
- In procurement of the Michigan Housing Locator services, MSHDA seeks to provide:
 - A free tool for SOM property owners, MSHDA-funded, and other government agency funded housing to advertise available rental units;
 - A publicly accessible, consumer-friendly, web-based, market driven inventory of SOM rental housing units;
 - Human service agencies with tools to assist clients with finding available housing in their area;
 - SOM citizens with a way to search for affordable rental housing;
 - An extensive list of available housing for quick deployment in the event of a disaster, and;
 - Protection of MSHDA assets by reducing vacancies at properties with outstanding mortgages.

3. CONTRACT TERM

The overall term for the Contract is expected to be Three (3) years, with Three (3) one-year options.

4. SPECIFIC STANDARDS

Enterprise IT Policies, Standards and Procedures

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

Enterprise IT Policies, Standards and Procedures: http://www.michigan.gov/dtmb/0,4568,7-150-56355_56579_56755---,00.html

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 Look and Feel Standards http://www.michigan.gov/documents/som/Look_and_Feel_Standards.

Mobile Responsiveness

The Solution must be mobile responsive.

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 Contractor's Solution, where relevant, to level AA of the World Wide Web Consortium (W3C) Web Content Accessibility Guidelines (WCAG) 2.0. Contractor may 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

5. USER TYPE AND CAPACITY

Type of User	Access Type	Number of Users	Number of Concurrent Users
State Employees	Admin Access	5	5
State Employees	Write Access	50	50

Trusted Third Parties	Write Access	300	300
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6. ACCESS CONTROL AND AUDIT

The Solution must support State standard federated single sign on for end user access. The Solution must support multi-factor authentication for privileged/administrative access.

7. DATA RETENTION

MSHDA data retention of rent reasonableness is seven (7) years from the date of approval.

8. SECURITY

The State is seeking an externally-hosted Solution.

Externally Hosted

If externally hosted, Contractor must review the data security requirements set forth in **Schedule F – Data Security Requirements** to the COTS Terms and Conditions. Contractor must note any exceptions to the security requirements by redlining Schedule F – Data Security Requirements.

The solution will be storing sensitive data. The Contractor must describe how it will comply with the following and provide supporting evidence as part of their proposal:

- Must provide a GovCloud Solution that is hosted in a FedRAMP certified facility.
- Must be encrypted at rest and in flight using AES 256 bit or higher encryption.
- Must have multi-factor authentication for privileged/administrative access, however this level does not require a hard token at this time. Some other method such as SMMS text with passcode, phone call with temporary passcode or other approved multi-factor authentication method must be used.
- Must remain compliant with the NIST Special Publication 800.53 (most recent version) MOD controls.

The Contractor must acknowledge their agreement with this section and provide details for how they will meet the requirements.

9. END USER OPERATING ENVIRONMENT

The SOM environment is X86 VMware, IBM Power VM and Oracle VM, with supporting enterprise storage monitoring and management.

The software must run under commonly used web browsers. At a minimum the software must support Internet Explorer v9 or higher, Chrome v36 or higher, Firefox v31 or higher, and Safari v5.1 or higher both under the Windows, MAC, OS, iOS, and Android operating systems for desktop and mobile devices.

The Contractor must support the current and future State standard environment at no additional cost to the State.

Contractor must:

- Describe the optimal technical environment based on the environment choices set forth above.
- Describe 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.

- Describe if it can comply with the current environment and how it intends to comply with any future changes to the user environment. And if not, describe what end user operating environment its Solution supports.
- Describe if it can support the original environment throughout the term of the contract.
- Describe how it communicates changes to its roadmaps.
- Identify any plug-ins necessary for the proposed solution to meet the system requirements of this request.
- Describe how customers collaborate with your organization in the decision making process for upgrades, maintenance, and change control.

10. SPECIFICATIONS

Contractor must provide a detailed description of the Solution to be provided under the resulting Contract including, but not limited to, a detailed description of the proposed 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 proposed Solution the Contractor must identify these separately in its proposal (including identifying any associated costs in Exhibit B – Cost Tables).

Contractor must include any end-user license agreements that will be required by the State to access the Solution.

11. MILESTONES AND DELIVERABLES

The State's proposed milestone schedule and associated deliverables are set forth below. Contractor may propose alternative timeframes and deliverables, but Contractor must provide an explanation as to why the State's schedule and associated deliverables is not feasible.

Proposed Milestone and Deliverables below:

Milestone Event	Associated Milestone Deliverable(s)	Expected Schedule
Project Planning	Project Kickoff	[Contract Execution + 10 days]
Requirements and Design Validation	Validation sessions, Final Requirement Validation Document, Final Design Document, Final Implementation Document	[Execution + 90 days]
Provision environments	Validate Test and Production environments	[Execution + 90 days]
Installation and Configuration of software	Final Solution and Testing Document	[Execution + 120 days]

Testing and Acceptance	Final Test Results Report, Final Training Documentation, Final Acceptance	[Execution+150 days]
Post Production Warranty	Maintenance and Support (free of charge)	Production + 90 days
Production Support Services	Ongoing after Final Acceptance.	Ongoing

Contractor must provide a Work Breakdown Structure (WBS) that corresponds with the milestone dates set forth above (or with Contractor's alternatively proposed schedule). The WBS must be detailed enough to identify all State and Contractor responsibilities.

The Contractor will provide a project manager (PM) to work with the State's project manager. Contractor's PM will ensure the appropriate Contractor resources are on-boarded for the project and will conduct a kick off meeting with the State's PM and identified State resources to review the project plan and approach, the scheduled tasks and their related timing, and to identify any potential risks or issues related to the project. The Contractor's PM 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.

The Contractor PM will monitor project implementation progress and report on a weekly basis to the State 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

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, or an equivalent methodology proposed by the Contractor. The Contractor is required to review <http://www.michigan.gov/suite> and demonstrate how each PMM/SEM requirement will be met. Contractors wishing to use their own documents must submit an example of the document that will be substituted. If the Contractor deems a document to be non-applicable, please provide reasons for the

determination. The State reserves the right to give final approval of substituted documents and items marked as non-applicable.

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, Contractors 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.

12. REQUIREMENT VALIDATION SERVICES

Proposed approach to requirements validation to ensure that the Solution meets the specifications set forth in this contract.

13. CONFIGURATION OR CUSTOMIZATION SERVICES

Configuration or customization changes that will be made to the Solution in order to meet the specifications set forth in this contract. Customization (i.e. changes made to the underlying source code) are strongly discouraged and may not be considered.

14. TESTING SERVICES AND ACCEPTANCE

Contractor must review **Section 11 Pre-Delivery Testing** and **Section 12 Acceptance Testing**, of the **COTS Contract Terms**.

15. TRAINING SERVICES

The Contractor must provide administration and end-user training for implementation, go-live support, and transition to customer self-sufficiency. The Contractor must provide available training options and include details such as: typical class size, materials to be provided, class duration, on-site or web based. The Contractor must provide a training plan for go-live support and transition to self-support, including options and details such as the number of dedicated personnel, staff location, hours available and duration of go-live support.

Contractor must provide details on, 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.

16. HOSTING

The State is seeking either an externally-hosted Solution.

Externally Hosted

Contractor must review the State's standard **Service Level Agreement (SLA) attached as Schedule E** to the COTS Terms and Conditions, and note any exceptions to the SLA by redlining the document.

Contractor must maintain and operate a backup and disaster recovery plan to achieve a Recovery Point Objective (RPO) of 8 hours, and a Recovery Time Objective (RTO) of 4 hours. Contractor must include a copy of its Disaster Recovery Plan as part of their proposal, which will be treated by the State as confidential information.

17. SUPPORT AND OPERATIONS

The State is seeking an externally-hosted Solution.

Support-Hours

The State requires the Contractor to provide support for the solution at a minimum Monday thru Friday 8 AM to 8 PM Eastern Time, excluding holidays.

Externally Hosted

Contractor must review the State's standard **Service Level Agreement (SLA) attached as Schedule E** to the COTS Terms and Conditions, and note any exceptions to the SLA by redlining the document.

18. DOCUMENTATION

Contractor must provide 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.

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 (d) preparing an accurate accounting from which the State and Contractor may reconcile all outstanding accounts.

Contractor must provide a detailed transition-in and transition-out plan, including any roles or responsibilities expected of the State. The plan must adequately demonstrate the steps to migrate between Contractor's Solution and third-party Solutions.

20. PROFESSIONAL SERVICES

Contractor must include all other professional services that are necessary to implement and support the Solution

21. PRICING

Exhibit B – Cost Tables a detailed description of all costs associated with implementing, hosting (if applicable), maintaining and supporting the Solution, including all requested services set forth in the contract.

Travel and Expenses

The State does not pay for overtime or travel expenses.

22. CONTRACTOR KEY PERSONNEL

Contractor Contract Administrator. 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
John McKay CEO Nan McKay and Associates 1810 Gillespie way El Cajon, CA 92020 Phone: 800-783-3100 Email: john@nanmckay.com

Contractor Project Manager. The Contractor Project Manager 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
John McKay CEO Nan McKay and Associates 1810 Gillespie way El Cajon, CA 92020 Phone: 800-783-3100 Email: john@nanmckay.com

Contractor Service Manager. Name of individual to serve as primary contact with respect to the Services, who will have the authority to act on behalf of Contractor in matters pertaining to the receipt and processing of Support Requests and the Support Services.

Contractor
John McKay CEO Nan McKay and Associates 1810 Gillespie way El Cajon, CA 92020 Phone: 800-783-3100 Email: john@nanmckay.com

Contractor Security Officer. Name of individual to respond to State inquiries regarding the security of the Contractor's systems. This person must have sufficient knowledge of the security of the Contractor Systems and the authority to act on behalf of Contractor in matters pertaining thereto.

Contractor
John McKay CEO Nan McKay and Associates 1810 Gillespie way El Cajon, CA 92020 Phone: 800-783-3100 Email: john@nanmckay.com

23. 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.

24. STATE RESOURCES/RESPONSIBILITIES

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 who will have the authority to act on behalf of the State in approving Deliverables, and day to day activities.

Agency Business 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 Lead. The State Technical Lead will serve as the primary contact with regard to implementation technical advisement.

25. MEETINGS

At start of the engagement, the Contractor PM must facilitate a Project Kick Off Meeting with the support from the State's PM 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 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.

26. PROJECT REPORTS


Once the Project Kick-Off meeting has occurred, the Contract Project Manager will provide weekly status / progress reports to the State's Project Manager. The Authority and Contractor may agree in writing to change the frequency of reports.

27. ADDITIONAL INFORMATION

The State reserves the right to purchase any additional products or services from the Contractor during the duration of the Contract. Contractor is encouraged to offer information to describe additional Solution functionality or professional services that the specifications do not address.

IN WITNESS WHEREOF the Authority and the Contractor have executed this Agreement as of the date first above written.

MICHIGAN STATE HOUSING DEVELOPMENT AUTHORITY

By: _____

Gary Heidel
Acting Executive Director

NAN MCKAY AND ASSOCIATES, INC

By: _____ 12/13/2019
DocuSigned by:
5CA0C62C455F4A0

John McKay
CEO

**ATTACHMENT A – Table 1
FUNCTIONAL SPECIFICATION**

Section	Sub	Functional Requirement	Req.
1.00			
1.01		The supplier, at a minimum, must provide a web based application accessible using common web browsers on both desktop and mobile devices.	
	a.	Microsoft Internet Explorer	E
	b.	Google Chrome	O
	c.	Mozilla Firefox	O
	d.	Apple Safari	O
	e.	Other - Supplier Explain:	O
1.02		The application shall be accessible to all users 24 hours per day, 7 days a week.	E
1.03		The application shall contain a secure login feature with a distinct login for each user using industry best practices for password security.	E
1.04		The application shall allow the assignment of user roles which limit a user's access within the application.	E
1.05		The application shall distinguish each user's access based on the assigned security role.	E
1.06		The application shall contain the ability to assign an individual user to an agency/group designation that can be used to sort and filter records.	E
1.07		The application shall allow the administrator role to limit which users can delete rent reasonableness records.	E

1.08		The application shall contain a Market Analyst role that has the ability to manually adjust selected comparable units and have access to market analysis tools.	E
1.09		The Market Analyst role shall have the ability to view and export (Excel .xlsx format) comparable units from the database with the ability to apply the following filters:	
	a.	County: All of Michigan or specific county	E
	b.	City: All within Michigan, or all within selected county, or a specific city within the selected county	E
	c.	Property type: All or specific	E
	d.	Bedroom size: All or specific	E
	e.	Source Type: All or specific (Open Market, Rented, PHA Entry, Owner Entry)	E
	f.	Date range (listing date)	E
	g.	Address string	E
	h.	Zip code	E
	i.	Sort by: List of dataset columns	E
1.10		The Market Analyst export shall include the following columns of data:	
	a.	Source of listing	E
	b.	Address	E
	c.	Unit number	E
	d.	Unit size	E
	e.	Year built	E
	f.	Condition	E
	g.	Utilities: Column for each	E
	h.	Utilities paid by: Owner or tenant for each	E
	i.	Amenities: Column for each	E
	j.	County	E
	k.	City	E
	l.	Zip	E
	m.	Property type	E
	n.	Number of bedrooms	E

	o.	Number of bathrooms	E
	p.	Listed rent	E
	q.	Date listed	E
	r.	Latitude	E
	s.	Longitude	E
1.11		The application shall support up to 400 end users, concurrently.	E
	a.	Suppliers with a user based cost structure shall provide pricing estimates at several levels below the requested 400 end users.	E
1.12		The application shall allow an administrator to complete the following tasks, at a minimum:	
	a.	Create and manage user accounts.	E
	b.	Assign security roles to users.	E
	c.	Reset user passwords.	E
	d.	View and manage utility allowance schedules.	E
	e.	Generate Ad Hoc report of certifications using any available data field found within a completed rent reasonableness certification.	E
	f.	Override utility selection when completing a rent reasonableness certification.	E
	g.	Override address validation when entering subject unit address for rent reasonableness certification.	E
	h.	Enter historical rent reasonableness certifications up to 3 years old.	E
	i.	The application shall contain security role settings for each application function. Please describe the applications user security setup. What services and fields can be controlled?	E
1.13		The application and supplier shall need to support, maintain, and process up to 30,000 rent reasonableness certifications annually.	E

1.14		The application shall allow MSHDA to upload 3 years of utility allowance schedules for use in calculating unit gross rent for rent reasonableness certifications.	E
2.00			
2.01		At implementation, the supplier shall populate the application's database with sufficient comparable rental unit data to cover MSHDA jurisdiction.	E
2.02		Supplier shall continue to populate the application's database with new comparable rental unit data on a consistent schedule and at the request of MSHDA. Provide data mining methodology.	E
2.03		Supplier shall maintain an adequate amount of comparable rental unit data, consistent with local housing market bedroom sizes and unit types, for every county in the state of Michigan.	E
2.04		Comparable rental unit data should focus on currently vacant units or units leased within the past two years.	E

2.05		<p>Comparable rental units must represent unrestricted market rents. Therefore, units that receive some form of federal, state, or local assistance that imposes rent restrictions cannot be considered comparable units. These include units assisted by HUD through any of the following programs: Section 8 project-based assistance, Section 236 and Section 221(d)(3) Below Market Interest Rate (BMIR) projects, HOME or Community Development Block Grant (CDBG) program-assisted units in which the rents are subsidized; units subsidized through federal, state, or local tax credits (LIHTC); units subsidized by the Department of Agriculture rural housing programs, and units that are rent-controlled by local ordinance.</p> <p>Describe supplier controls for compliance.</p>	M
2.06		At a minimum, the supplier shall gather the following general information for each comparable rental unit:	
	a.	Address	M
	b.	Unit/Apt	M
	c.	City	M
	d.	State	M
	e.	Zip code	M
	f.	County	M
	g.	Number of bedrooms	M
	h.	Number of bathrooms	M
	i.	Size (sqft)	M
	j.	Year built (age)	M
	k.	Contract rent	M
	l.	Other - Supplier Explain:	O
2.07		At a minimum, the supplier shall identify the unit type for each comparable rental unit:	

	a.	Low-rise	M
	b.	High-rise	M
	c.	Garden	M
	d.	Walkup	M
	e.	Multifamily	M
	f.	Duplex	M
	g.	Row house	M
	h.	Townhouse	M
	i.	Single Family	M
	j.	Manufactured	M
	k.	Other - Supplier Explain:	O
2.08		At a minimum, the supplier shall identify the following space heating utility type for each comparable rental unit:	
	a.	Natural Gas	M
	b.	Bottle Gas	M
	c.	Electric	M
	d.	Fuel Oil	M
2.09		At a minimum, the supplier shall identify the following cooking utility type for each comparable rental unit:	
	a.	Natural Gas	M
	b.	Bottle Gas	M
	c.	Electric	M
2.10		At a minimum, the supplier shall identify the following hot water utility type for each comparable rental unit:	
	a.	Natural Gas	M
	b.	Bottle Gas	M
	c.	Electric	M
	d.	Fuel Oil	M
2.11		At a minimum, the supplier shall identify the tenant paid utilities and tenant supplied appliances for each comparable rental unit:	
	a.	Space Heating	M
	b.	Cooking	M
	c.	Hot Water	M
	d.	Other Electric	M
	e.	Water	M

	f.	Sewer	M
	g.	Trash	M
	h.	Air conditioning	M
	i.	Stove	M
	j.	Refrigerator	M
2.12		At a minimum, the supplier shall gather the following amenity information for each comparable rental unit:	
	a.	Washer	M
	b.	Dryer	M
	c.	Dishwasher	M
	d.	Microwave	M
	e.	Washer and dryer hook-ups	M
	f.	Garbage disposal	M
	g.	Ceiling fan	M
	h.	Gated community	M
	i.	Pool	M
	j.	Parking	M
	k.	Exterior features	M
	l.	Recreational facilities	M
	m.	Storage areas	M
	n.	Patio/Fenced Yard/Balcony/Playground	M
	o.	Air conditioning	M
	p.	Other - Supplier Explain:	O
2.13		Supplier shall use the following HUD recommended data sources to gather comparable rental unit data:	
	a.	Websites	E
	b.	Newspapers	E
	c.	For Rent Signs	E
	d.	Bulletin Boards	E
	e.	Real Estate Companies	E
	f.	Other - Supplier Explain:	O
2.14		At a minimum, the supplier shall gather the following listing information for each comparable rental unit:	
	a.	Data source	M
	b.	Date listed on the source	M

	c.	Date added to application	M
	d.	Other - Supplier Explain:	O
2.15		The application shall retain at a minimum, 3 years of historical rental unit comparable data for use in generating rent reasonableness certification reports.	E
3.00			
3.01		At a minimum, the application shall allow the user to enter the following general information for the subject unit:	
	a.	Address	M
	b.	Unit/Apt	M
	c.	City	M
	d.	State	M
	e.	Zip code	M
	f.	County	M
	g.	Number of bedrooms	M
	h.	Number of bathrooms	M
	i.	Size (sqft)	M
	j.	Year built (age)	M
	k.	Contract rent	M
	l.	Mark as accessible (barrier free) unit	E
	m.	Other - Supplier Explain:	O
3.02		At a minimum, the application shall allow the user to enter/select the unit type for the subject unit:	
	a.	Low-rise	M
	b.	High-rise	M
	c.	Garden	M
	d.	Walkup	M
	e.	Multifamily	M
	f.	Duplex	M
	g.	Row house	M
	h.	Townhouse	M
	i.	Single Family	M
	j.	Manufactured	M
	k.	Other - Supplier Explain:	O

3.03		At a minimum, the application shall allow the user to enter/select the space heating utility type for the subject unit:	
	a.	Natural Gas	M
	b.	Bottle Gas	M
	c.	Electric	M
	d.	Fuel Oil	M
3.04		At a minimum, the application shall allow the user to enter/select the cooking utility type for the subject unit:	
	a.	Natural Gas	M
	b.	Bottle Gas	M
	c.	Electric	M
3.05		At a minimum, the application shall allow the user to enter/select the hot water utility type for the subject unit:	
	a.	Natural Gas	M
	b.	Bottle Gas	M
	c.	Electric	M
	d.	Fuel Oil	M
3.06		At a minimum, the application shall allow the user to enter/select the tenant paid utilities and tenant paid appliances for the subject unit:	
	a.	Space Heating	M
	b.	Cooking	M
	c.	Hot Water	M
	d.	Other Electric	M
	e.	Water	M
	f.	Sewer	M
	g.	Trash	M
	h.	Air conditioning	M
	i.	Stove	M
	j.	Refrigerator	M
3.07		At a minimum, the application shall allow the user to enter/select the following amenity information for the subject unit:	
	a.	Washer	M
	b.	Dryer	M

	c.	Dishwasher	M
	d.	Microwave	M
	e.	Washer and dryer hook-ups	M
	f.	Garbage disposal	M
	g.	Ceiling fan	M
	h.	Gated community	M
	i.	Pool	M
	j.	Parking	M
	k.	Exterior features	M
	l.	Recreational facilities	M
	m.	Storage areas	M
	n.	Patio/Fenced Yard/Balcony/Playground	M
	o.	Air conditioning	M
	p.	Other - Supplier Explain:	O
3.08		The application, upon entry of the subject unit, shall return the following information to the user for review.	
	a.	Address displayed on map	E
	b.	Address validation	E
	c.	Walk Score (walkscore.com)	E
	d.	Property tax information	E
3.09		Supplier shall populate the subject unit database with all leased or previously leased units within the last 5 years from MSHDA's existing housing database for all data fields listed in section 3.01-3.07.	E
3.10		The application shall contain a search function to select a subject unit.	M
3.11		After a successful search, the application shall populate the fields listed in sections 3.01-3.07 using historical data.	E
3.12		The user shall have the ability to edit/modify the historical data for the subject unit.	E
3.13		After an unsuccessful search, the user shall have the ability to manually enter new subject unit data in all fields listed in sections 3.01-3.07.	E

3.14		Manually entered subject unit data shall be retained historically and shall become searchable within the database for future rent reasonableness certifications.	E
3.15		The application shall allow the user to copy or create similar unit to an existing unit by filling in the data fields and allowing the user to edit unit specific details.	E
3.16		The application shall contain a form of address validation that will ensure valid addresses are entered and that duplicate addresses are not entered. Explain Methodology.	E
3.17		The application shall allow MSHDA to bulk upload batches of subject units into the application.	E
4.00			
4.01		Once a subject unit is selected, the application shall automatically sort and rank all comparable rental units, from most comparable to least comparable, using HUD's 9 factors of comparability:	
	a.	Location	M
	b.	Quality	M
	c.	Size	M
	d.	Unit type	M
	e.	Age	M
	f.	Amenities	M
	g.	Housing services	M
	h.	Maintenance services	M
	i.	Utilities	M

4.02		The application shall compare the Walk Score of the subject unit as compared to the comparable units and make rent adjustments based on administrator defined criteria. The administrator shall have the ability to set rent adjustment levels for multiple Walk Score ranges.	E
4.03		The application shall use a HUD approved methodology for evaluating, selecting, and ranking comparable rental units.	
	a.	Appraisal	E
	b.	Point based	E
	c.	Other - Supplier Explain:	O
4.04		The application shall allow the administrator to select from the following criteria to determine the maximum approved rent:	
	a.	Lowest comparable unit rent.	E
	b.	Median rent from selected comparable units.	E
	c.	Average rent from selected comparable units	E
	d.	Highest comparable unit rent.	E
	e.	Average rent from selected comparable units plus administrator defined percentage.	E
4.05		The application shall automatically calculate the utility allowance and gross rent by referencing the appropriate utility allowance schedules.	E
4.06		The application shall allow the user to select a current or historical utility allowance schedule to determine the utility allowance and gross rent.	E
4.07		The application shall use the most recent utility allowance for the subject unit county when a utility allowance schedule is not selected.	E

4.08		The application shall contain a minimum of 2 methods for selecting the 3 most comparable rental units for the rent reasonableness certification report.	
	a.	Automatic selection by the application	E
	b.	Manual selection by the user -based on role.	E
	c.	Other - Supplier Explain:	O
4.09		The application shall automatically limit the list of comparable rental units within a time frame specified by the administrator role.	E
4.10		The application shall automatically limit the list of comparable rental units by distance from the subject unit as specified by the administrator role.	E
4.11		When using automatic selection, the application shall use the top 3 most comparable rental units on the list for the rent reasonableness certification.	E
4.12		When using manual selection, the application shall allow the user to manually select the 3 comparable rental units from any position on the list to be used for the rent reasonableness certification report.	E
4.13		The application shall contain a security policy that allows the administrator to limit the user roles that can use the manual selection method for selecting comparable rental units.	E
4.14		The application shall contain a map feature that displays the location of the comparable rental units on the ranking list.	E

4.15		An administrator shall have the ability to search, view, and select comparable units within the map feature with no limit on distance from subject unit. If an administrator modifies the existing parameters of a comparable unit search, the map shall refresh to include new data from updated parameters.	E
4.16		The application shall adjust the rent range by an administrator defined percentage amount for subject units entered as accessible (barrier free).	E
4.17		The application shall have an editable rent reasonableness certification report review page consisting of the critical data for the subject unit and the selected comparable rental units.	E
4.18		The application shall allow the user to save the review page as a work in progress and return to the page at a later date and time for completion.	E
4.19		The review page must highlight the similarities and differences in the comparable rental units against the subject unit for easy review.	E
4.20		The application shall contain a feature that allows the user to finalize and certify the rent reasonableness certification report.	E
4.21		Certified rent reasonableness certification reports shall become locked down and unavailable for edit to all user roles except the administrator role.	E
4.22		The application shall record the following when a rent reasonableness certification reports certified:	
	a.	User certifying the report	E
	b.	Date and time of certification	E

4.23		The certified rent reasonableness certification report shall have the ability to be printed and saved in Adobe PDF (.pdf) format.	E
4.24		The rent reasonableness certification report, at a minimum, shall contain the following information for the subject unit and all comparable rental units:	
	a.	Address	E
	b.	Unit/Apt	E
	c.	City	E
	d.	State	E
	e.	Zip code	E
	f.	County	E
	g.	Number of bedrooms	E
	h.	Number of bathrooms	E
	i.	Size (sq ft)	E
	j.	Year built (age)	E
	k.	Contract rent	E
	l.	Unit Type	E
	m.	Utility type(s)	E
	n.	Utility source(s)	E
	o.	Utility responsibilities	E
	p.	Amenities	E
	q.	Other - Supplier Explain:	O
4.25		The rent reasonableness certification, at a minimum, shall display the following summary information:	
	a.	Subject unit contract rent	E
	b.	Subject unit utility allowance	E
	c.	Subject unit gross rent	E
	d.	User approved by	E
	e.	Approved date and time	E
	f.	Comparable rental unit contract rent	E
	g.	Comparable rental unit utility allowance	E
	h.	Comparable rental unit gross rent	E
	i.	Rent reasonableness determination outcome	E
5.00			

5.01		The supplier shall provide all training materials, training plans, and other documentation to MSHDA in hard copy as well as an electronic version covering areas such as product installation, use, and administration.	E
5.02		Training materials provided shall become the property of MSHDA.	E
5.03		The supplier shall provide an in person or online "Train-the-Trainer" training session to be held at MSHDA for a minimum of 10 persons.	E
5.04		The supplier shall provide online or classroom style training on upgrades and modifications of the application that affect end-user functionality at no additional cost to MSHDA.	E
5.05		The supplier shall provide documentation updates for all appropriate manuals as capabilities, enhancements, or improvements are made to the application during the term of the contract, software license, and maintenance agreement.	E
5.06		The supplier shall provide complete technical support during MSHDA business hours. Monday through Friday 8:00 AM to 5:00 PM (EST).	E
6.00			
6.01		The application shall make all rent reasonableness certification reports digitally available within the database for a period of 7 years from the date of approval.	E
6.02		The application shall have the ability to <u>filter</u> historical rent reasonableness certification reports by the following:	
	a.	Subject unit address	E
	b.	Subject unit city	E
	c.	Tenant name	E

	d.	Reason code	E
	e.	User	E
	f.	Certification date	E
	g.	County	E
	h.	Approval date	E
	i.	Other - Supplier Explain:	E
6.03		The application shall have the ability to sort historical rent reasonableness certification reports by the following:	
	a.	User	E
	b.	Subject unit address	E
	c.	Subject unit zip code	E
	d.	Reason code	E
	e.	Subject unit type	E
	f.	Subject unit number of bedrooms	E
	g.	Subject unit number of bathrooms	E
	h.	Certification date	E
	i.	County	E
	j.	Approval date	E
	k.	Other - Supplier Explain:	O
6.04		The application shall have the ability to search historical rent reasonableness certification reports by the following:	
	a.	User	E
	b.	Subject unit address	E
	c.	Subject unit zip code	E
	d.	Reason code	E
	e.	Subject unit type	E
	f.	Subject unit number of bedrooms	E
	g.	Subject unit number of bathrooms	E
	h.	Certification date	E
	i.	County	E
	j.	Approval date	E
	k.	Other - Supplier Explain:	O
6.05		The list of filtered/sorted data must be able to be exported in the following formats:	
	a.	Adobe PDF (.pdf)	E
	b.	Microsoft Excel (.xlsx)	E

6.06		The application shall provide the administrator a comparable unit report that will contain the following data:	
	a.	County	E
	b.	Unit address	E
	c.	Unit bedroom size	E
	d.	Unit type	E
	e.	Gross rent	E
	f.	Date added to database	E
	g.	Data source	E
6.07		The application shall provide the administrator a Login History report that will contain the following data:	
	a.	Username	E
	b.	Last login date	E
6.08		The application shall provide the administrator an active/inactive user report that will contain the following data:	
	a.	Username	E
	b.	Last login date	E
	c.	User role	E
	d.	Status (active, inactive)	E
6.09		All reports will contain a date field parameter to limit the data returned.	E
10.00			
10.01		The supplier, at a minimum, must provide a website accessible using common web browsers on both desktop and mobile devices, 24 hours per day, 7 days a week.	
	a.	Microsoft Internet Explorer	E
	b.	Google Chrome	E
	c.	Mozilla Firefox	E
	d.	Apple Safari	E
	e.	Mobile App	O
	f.	Other - Supplier Explain:	O
10.02		The website supports an unlimited number of property listings.	E
10.03		The website is Americans with Disabilities Act (ADA) compliant.	M

10.04		The website's data and all data collected within the website is the sole property of MSHDA.	E
10.05		The website's URL www.michiganhousinglocator.com is the sole property of MSHDA.	M
10.06		The website allows the addition and removal of an unlimited amount of links to any page per MSHDA managements request.	E
10.07		All advertisement(s) on the website need to benefit MSHDA and be preapproved by MSHDA Management.	M
10.08		The website contains a privacy policy regarding collected information.	M
10.09		The website has no limit to the number of units listed in database.	E
10.10		The website contains a landing page for a public user to enter search criteria as well as provide log in links for both existing landlord and tenant users.	E
10.11		At a minimum, the website database will collect/contain the following general information for each unit:	
	a	Property Name (if applicable)	M
	b	Address	M
	c	Unit/Apt	M
	d	City	M
	e	State	M
	f	Zip Code	M
	g	County	M
	h	Number of Bedrooms	M
	i	Number of Bathrooms	M
	j	Size (sqft)	E
	l	Year Built (age)	E
	m	Property Condition	O
10.12		At a minimum, the website database collects/contains the following unit type for each unit:	
	a.	Low-rise	O
	b.	High-rise	O

	c.	Garden	O
	d.	Walkup	O
	e.	Multifamily	O
	f.	Duplex	E
	g.	Row house	O
	h.	Townhouse	E
	i.	Single Family	E
	j.	Manufactured	O
	k.	Other - Supplier Explain:	O
	l.	Apartments	E
10.13		At a minimum, the website database collects/contains the following space heating fuel type for each unit:	
	a.	Natural Gas	O
	b.	Bottle Gas	O
	c.	Electric	O
	d.	Fuel Oil	O
10.14		At a minimum, the website database collects/contains the following cooking fuel type for each unit:	
	a.	Natural Gas	O
	b.	Bottle Gas	O
	c.	Electric	O
10.15		At a minimum, the website database collects/contains the following hot water utility fuel type for each unit:	
	a.	Natural Gas	O
	b.	Bottle Gas	O
	c.	Electric	O
	d.	Fuel Oil	O
10.16		At a minimum, the website database collects/contains the following fields in reference to landlord or tenant paid utilities and appliance. (who pays?)	
	a.	Space Heating	E
	b.	Cooking	E
	c.	Hot Water	E
	d.	Other Electric	E
	e.	Water	E
	f.	Sewer	E
	g.	Trash	E

	h.	Air conditioning	E
	i.	Stove	E
	j.	Refrigerator	E
10.17		At a minimum, the website database collects/contains the following amenities for each unit:	
	a.	Washer	E
	b.	Dryer	E
	c.	Dishwasher	E
	d.	Microwave	O
	e.	Washer and dryer hook-ups	E
	f.	Garbage disposal	E
	g.	Ceiling fan	O
	h.	Gated community	O
	i.	Pool	E
	j.	Parking	E
	k.	Exterior features	O
	l.	Recreational facilities	O
	m.	Storage areas	E
	n.	Patio/Fenced Yard/Balcony/Playground	O
	o.	Air conditioning	E
	p.	Other - Supplier Explain:	O
10.18		At a minimum, the website database collects/contains the following lease information for each unit:	
	a.	Month to Month	E
	b.	Lease Length - Numerical Value 2 to 24	E
	c.	Rent-to-Own	O
	d.	Other - Supplier Explain:	O
10.19		At a minimum, the website database collects/contains the following landlord contact information for each unit:	
	a.	Phone	E
	b.	Fax	E
	c.	E-mail address(es)	E
	d.	Website	E
	e.	Office Hours	E
10.20		At a minimum, the website database collects/contains accessibility information for each listing.	

	a.	No Step or Ramped Entry	O
	b.	Accessible Parking	O
	c.	32" or Wider Doorways	O
	d.	36" or Wider Doorways	O
	e.	Level Style Door Handles	O
	f.	Environmental controls 15" to 48" Above Floor	O
	g.	Grab Bars in Bathroom	O
	h.	Low Threshold or Roll-in shower	O
	i.	5' Turning Radius or T-Turn in Bathroom	O
	j.	Accessible Bathroom Vanities	O
	k.	Front Loading or Front Control Kitchen Appliances	O
	l.	Accessible Kitchen Counters	O
	m.	Clear Floor Area in Front of Sink and Range	O
	n.	Other - Supplier Explain:	O
10.21		The program database may be populated with new rental data continually and regularly by the contractor using MetaCrawlers. All data mining and database maintenance will be done by the contractor. An opt out option should be provided	O
10.22		The program allows MSHDA to manually add rental unit data and bulk upload 'tagged' properties	E
10.23		The program maintains a historical database of available rental unit data for a period of 3 years and provide admin with an Inactive Property report	O
10.24		The program shall contain a form of address validation that will ensure valid addresses are entered and that duplicate addresses are not entered. Explain Methodology.	M

10.25		The website includes a header bar with the links to the State and MSHDA websites, and a link to login to a user (tenant) account.	E
10.26		The website includes a title bar that remains static at the top of each page as users navigate through the website. Title bar provides the links to the "Homepage", "Advance Search", "Post a New Property", and "Access Resources" links.	E
10.27		The website shall include breadcrumb links as users drill down into the website.	E
10.28		The website includes a news banner section on the home page that meets the following criteria:	
	a.	The banner is editable by specific user roles only.	E
	b.	Messages in the banner will have the capability to be constant, or have expiration dates.	E
	c.	If there is not a message in the banner, the banner will not display on the home page.	E
10.29		The website shall include a general disclaimer regarding the contents of the website.	M
10.30		The website includes links to web pages in the footer. These links can be updated at MSHDA's request, but will include at a minimum:	
	a.	A link to the Michigan Housing Locator Legal Disclaimer	M
	b.	A link to the Michigan.gov page	M
	c.	A link to the MSHDA home page	M
	d.	A link to the SOM Accessibility Policy	M
10.31		The website shall include a resources page that meets the following criteria:	

	a.	The resource page displays informational text and hyperlinks to other sites that are of benefit to tenants.	E
	b.	The number of links/amount of resources available is not limited.	E
	c.	The mechanism for updating these links is up to the supplier. However, if MSHDA staff (with appropriate permissions) are expected/allowed to update these links and informational text, they should not be required to do so with HTML. This should be done using standard text editing tools, similar to those used with word processing or text software via a content management framework. This editing should be limited to text with some capabilities for formatting, and hyperlinks which are clickable	E
10.32		Property data collected must be simple to encourage listings and should capture a minimum number of fields while encouraging further entry for property.	E
11.00			
11.01		The website shall have a secure log in feature with a distinct log in for each user.	M
11.02		The website shall contain multi-level security including the following roles:	
	a.	Admin	M
	b.	Landlord	M
	c.	Tenant	M
	d.	PHA Staff	E

11.03		The website requires new account users to comply with terms of use, not limited to, but including clarification of information ownership and the rights to update the postings, verifying use of website functionality occurs at users own risk, and clarification that posting property for sale will result in removal account and property listings from the website.	M
12.00			
12.01		The website provides a notification setup screen for tenant users, which allows them to setup or change notifications of property status changes to:	
	a.	Timing of the notification from daily to weekly.	E
	b.	Expiration of notification to 30, 60, or 90 days.	E
	c.	E-mail address where notifications are received.	E
	d.	Provide the ability to delete notifications.	E
	e.	Provide the ability to view the search results of an established notification.	E
13.00			
13.01		The website includes an admin role with the following functions:	
	a.	Create and Manage Users (reset user passwords)	M
	b.	Generate Audit Reports	M
	c.	Add Unit Data	M
	d.	Set Default Parameters (e.g. State, Proximity, etc.)	M

	e.	Allow for a mass e-mails to property owners to request donations of housing and inform them of disaster relief efforts in the event of a housing emergency. This must only be an administrative function of the website.	M
	f.	Flag (Remove) Listings.	M
	g.	Place properties on hold (pause), so they aren't presented on the website.	M
	h.	Sort and filter landlord listings by company name or user account.	M
13.02		Allow admin to add, edit, and remove a note into an admin only private note field on to the property listings. These must be available in the property data download.	M
13.03		Ability to create, rename, and delete user defined labels to attach to property listings. One of the uses of these labels is to identify which listing are MSHDA funded, HUD funded, and/or have tax credits.	M
13.04		Allow the user to add, remove, and edit labels attached to one or multiple property listings in the database. Labels added to a property tag the property as a "Partner Property tagged by MSHDA".	M
13.05		Ability to define whether an Agency label is a searchable label available to website users. Searchable labels shall be easily identifiable from the label listing.	M
13.06		Allow the property labels to display as part of the full property listing when website users access the property details on the website.	M
13.07		The website shall allow the admin role to search through the property listings dataset on the website by:	
	a.	Keywords with the listings	M

	b.	Location or Address on the listings	M
	c.	Rent based on Income units	M
	d.	User defined labels	M
13.08		At a minimum, the website shall provide a summary list of the search results with the following fields:	
	a.	Property name and address	M
	b.	Labels	M
	c.	Property type	M
	d.	Management Company	M
	e.	Time of last modification	M
	f.	Private notes of MSHDA Administrator	M
13.09		The website allows the admin role to sort and filter the property listings dataset on the website by:	
	a.	Last Modified	M
	b.	Management Company	M
	c.	Address	M
	d.	Property Type	M
14.00			
14.01		The website provides Michigan rental property landlords with the ability to list rental property information on the website for free.	M
14.02		The website requires landlords to setup an account to establish a property listing.	M
14.03		The website mandates landlords to be responsible for their own listings and updates.	M
14.04		The website provides step by step screens that walk landlord users through the entry of property information and provide helpful clarification on fields, which could have varied interpretations.	M
14.05		The website allows landlords to enter the following contact information for each property listing:	
	a.	Phone	E

	b.	Fax	E
	c.	E-mail address(es)	E
	d.	Website	E
	e.	Office Hours	E
14.06		The website allows landlords, at their discretion, to take the following actions on each property listing entered under their account:	
	a.	Mark listing as Active (available).	M
	b.	Mark listing as Inactive (paused).	M
	c.	Delete Listing	M
	d.	Add and Remove Multiple Photographs	M
	e.	Add, Edit, Remove caption for each photograph.	M
	f.	Select a Cover Photo	M
	g.	Edit Address	M
	h.	Edit Rent Amount	M
	i.	Identify if HCV program is accepted	E
	j.	Edit Description	M
	k.	Add external links to unit description.	M
	l.	Hide property address for security purposes	E
	m.	Record private notes on property listing that are not published to the public.	E
	n.	Update the longitude and latitude location through the mapping feature	E
14.07		The website provides landlords the ability to identify if a property listing has a waitlist and its status - closed or accepting applicants.	E
14.08		The website provides landlords with the ability to select amenity information from a defined list to standardize the listing presentations. Any selected amenities must allow for additional comments	E
14.09		The website provides landlords with the ability to adjust the school district. School district must be automatically determined as part of the address verification process	E

14.10		At a minimum, the website allows the landlord to select the property type from the following list:	
	a.	Low-rise	O
	b.	High-rise	O
	c.	Garden	O
	d.	Walkup	O
	e.	Multifamily	O
	f.	Duplex	E
	g.	Row house	O
	h.	Townhouse	E
	i.	Single Family	E
	j.	Manufactured	O
	k.	Apartments	E
	L	Other - Supplier Explain:	O
14.11		When deleting a property listing, the website will notify the user that deleting the entry will cause the need for reentry if they wish to repost the listing.	E
14.12		Landlords, at their discretion, will have the ability to add or remove the following documents to their property listings using common file types including .doc and .pdf.	
	a.	Brochures	E
	b.	Applications	E
	c.	Rental Agreements	E
	d.	Other - Supplier Explain:	E
14.13		The website allows landlords to review a list of all properties entered under their account with the ability to manage and view the following information for each property listing.	
	a.	Listing Status (Active, Inactive)	E
	b.	Street Address	E
	c.	City	E
	d.	State	E
	e.	Zip	E

	f.	Number of Leads (How many prospective tenants contacted the landlord via the website)	E
	g.	Number of Views	E
	h.	Number of Units	E
	i.	Market Rent Amount	E
	j.	Last Updated Date	E
14.14		The website allows a landlord to mark a property listing as an Income Based (subsidized) rental unit.	E
14.15		Income Based (subsidized) unit listings will contain a method for the user to enter the full market rent rate as well as a subsidized rent range. The rent range will be used only for advertising on website. Only full market rental rate shall be used in rent reasonableness comparable units.	E
14.16		The website will contain helpful hints, tips, etc for landlord users and offer a path to contact supplier for website support. Example: Encourage landlord to post pictures to enhance their listing exposure.	E
14.17		If multiple unit types exist within a property, the website will offer landlords the ability to enter information that distinguishes the available unit's information with the following fields:	
	a.	Unit Name	E
	b.	Unit Monthly Rent or Rent Range amount	E
	c.	Ability to identify income based rent	E
	d.	Unit Bedrooms	E
	e.	Unit Bathrooms	E
	f.	Unit Size - square footage	E
	g.	Unit Deposit, optional - Allow entry of a range for amount	E
	h.	Unit Description, optional	E

	i.	Number of units with this group, optional	E
	j.	Number of unit in this group that are available, optional	E
	k.	Identify whether or not leases are being accepted for specified unit	E
	l.	Identify the date when this unit type is available	E
	m.	Identify the accessibility of the unit for mobility, vision, and hearing. Optional	E
	n.	Ability to enter an open-ended description of the property	E
	o.	Total Number of Units – required entry field	E
	p.	Year Built – optional entry	E
14.18		The website contains a feature that allows landlord users to add a similar property listing based on an existing property listing. The intention is to streamline the listing process for properties with multiple floor plans.	E
15.00			
15.01		The website provides the general public with the ability to search rental property information on the website for free.	M
15.02		The website, at a minimum, contains search filters based on one or more of the following basic search criteria:	
	a.	City	M
	b.	County	M
	c.	Zip Code	M
	d.	Number of bedrooms – provide as a drop down list with the minimum number desired	E
	e.	Rent Desired Range (minimum and maximum)	E
	f.	Keywords posted within any of the listings' description fields	M
	g.	Accepts HCV's (Section 8 Vouchers)	E

	h.	Contains Accessible Units (Handicap, disabled, or barrier free)	E
	i.	Rent Based on Income (Subsidized)	E
	j.	Dogs Allowed	E
	k.	Cats Allowed	E
	l.	Smoke Free	E
	m.	Senior Housing	E
15.03		The website, at a minimum, provides the ability to enter additional search criteria beyond the basic search fields identified on the homepage. Advanced search must include basic search fields in addition to the following, and must be contained on a separate page of the site:	
	a.	Set a designated mile radius from the specific search location entered	E
	b.	School District (school district must be determined based on address validation and computed, not user entry)	E
	c.	Property Types - provide a drop down list of standardized property types	E
	d.	Availability by a specified move-in date	E
	e.	Provide a drop down calendar for date selection	E
	f.	Administrative Label (Labels are user defined)	E
	g.	Management Paid Utilities	E
15.04		The website allows users with the Tenant role to save search criteria and receive notification if new properties become listed with the saved search criteria.	E
15.05		The website, at a minimum, allows users to sort search results based on following criteria:	
	a.	Last Updated (default view)	E
	b.	Rent - Lowest to Highest	E
	c.	Rent - Highest to Lowest	E

	d.	Bedrooms - Fewest to Most	E
	e.	Bedrooms - Most to Fewest	E
	f.	Those with photos	E
	g.	Property Name	E
	h.	Proximity to user	E
15.06		The search results page will display all properties that meet the basic and/or advanced search criteria in the same format.	E
15.07		The search results page will identify how many properties from the database matched the search criteria.	E
15.08		The search results pager will provide the ability to view the search results as a list (default view) or on a map.	E
15.09		The search results page will identify whether MSHDA has tagged the property. If tagged use the label, "Partner Property tagged by MSHDA"	E
15.10		The website shall automatically sort properties flagged as "Partner Property tagged by MSHDA" to the top of the list within the search criteria specified by the user.	E
15.11		The search results page will be printable in PDF format and must contain information for each of the following fields:	
	a.	Property location (at least city and state)	E
	b.	Availability	E
	c.	Number of Bedrooms	E
	d.	Time since the listing was updated	E
	e.	Rent Amount	E
	f.	Manager of the property and phone number	E
	g.	Primary site picture, if attached	E
	h.	Property description	E
15.12		The website allows tenants to view photos within the property listing.	E

15.13		The website includes functionality that allows prospective tenants to contact landlords via email using an interface from within the website.	E
15.14		The internal email function provides tenants with the option of sending a copy to their own email address.	E
15.15		The website provides a map view of the search results using industry standard technologies such as Google, Bing or Arc GIS. And contain the following functionality:	
	a.	Pin points all properties that match the search criteria on a map	E
	b.	Provide a color coding on the points to distinguish each property's availability	E
	c.	Allows user to zoom in and out on the mapped locations	E
	d.	Allows users to select property pin points to view basic property information	E
	e.	Allows user to link from the map view listing to the full property listing	E
	f.	Provide the user with the option of turning map layers on or off, and present map views (map view, street view, satellite view, etc.) for user's choice	E
	g.	Ability to adjust or link to adjust the mile radius, if the mile radius was included in the initial search criteria	E
	h.	Ability to pan and zoom within the map	E
15.16		The map view page allows the user to add map layers showing:	
	a.	Nearest Hospital/Medical Facility	E
	b.	School	E
	c.	Shopping	E
	d.	Public Parks	E
	e.	Colleges / Universities	E
	f.	Police / Fire	E

	g.	Airports	O
	h.	Public Transportation	E
15.17		Tenants will be able to obtain driving directions to the property using industry standard mapping tools, such as Google maps, Bing maps, etc.	E
15.18		The website shall allow tenants to flag properties as a favorite:	
	a.	When a tenant flags a site as favorite, the website will prompt them to create an account in order to save their favorites.	E
	b.	The site will give tenants the ability to create, print or export lists of favorites without creating an account.	E
15.19		The website presents favorite properties in a side by side comparison of the properties with the following information:	
	a.	Primary site picture, if available	E
	b.	Development Name	E
	c.	Location	E
	d.	Available bedroom sizes	E
	e.	Property descriptions	E
	f.	When listing was last updated	E
	g.	Manager name and phone number	E
15.20		The website provides users with the ability to select multiple properties to compare features, with or without the user having created a user account.	E
15.21		The website includes the ability for prospective tenants to email a listing(s) to themselves or someone else utilizing an interface within the website.	E
15.22		Each property listed in the website shall be geocoded based on address, and will have the ability to be displayed on a map.	E

15.23		The website provides links to social networking sites, such as Facebook, Twitter, and Google+ friends with the following function:	
	a.	Property Owners can promote listings on their property social media sites.	E
	b.	Tenants can share listings to friends/self via social media.	E
15.24		The website contains the ability for a user to report a listing for improper usage, such as fraudulent information, offensive content, or other reasons. Supplier will be responsible for reviewing and making a determination on the validity of these complaints.	E
15.25		The website maintains and displays the created and last modified dates for each property listing.	E
15.26		The website, at a minimum, allows a user to drill down into a detailed description of a property listing and include the following information.	
	a.	Full Address	E
	b.	School District	E
	c.	Leasing Agent	E
	d.	Availability	E
	e.	Rent	E
	f.	Deposit	E
	g.	Bedrooms	E
	h.	Bathrooms	E
	i.	Square Footage	E
	j.	Property type	E
	k.	Year Built	E
	l.	Is there a waiting list at the property?	E
	m.	Property Description	E
	n.	Accepts HCVs (Section 8 Vouchers)	E
	o.	Property is Seniors Only	E
	p.	Amenities at the property	E
	q.	Appliances supplied	E
	r.	Utilities included versus resident responsibility	E

	s.	Lease lengths	E
	t.	Pets Allowed	E
	u.	Links to all photos attached to the property	E
	v.	Link to print documents	E
	w.	Link to share listing with a friend	O
	x.	Link to ask a question about the property – e-mail leasing agent	E
	y.	Link to mark the property as a favorite	E
	z.	Link to view all the properties you marked as favorites	E
	aa.	Provide a map of the property's location	E
	bb.	Provide links to social networking sites, such as Facebook, Twitter, and Google+	O
16.00			
16.01		The supplier will provide all training materials, training plans, and other documentation to MSHDA in hard copy as well as an electronic version covering areas such as product installation, use, and administration.	E
16.02		Training materials provided shall become the property of MSHDA.	E
16.03		The supplier will provide an in person or online "Train-the-Trainer" training session to be held at MSHDA for a minimum of 10 persons.	E
16.04		The supplier will provide online or classroom style training on upgrades and modifications of the application that affect end-user functionality at no additional cost to MSHDA.	E

16.05		The supplier will provide documentation updates for all appropriate manuals as capabilities, enhancements, or improvements are made to the application during the term of the contract, software license, and maintenance agreement.	E
16.06		The supplier will provide complete technical support during MSHDA business hours. Monday through Friday 8:00 AM to 5:00 PM (EST).	E
17.00			
17.01		The application will make all reports digitally available within the database for a period of 2 years from the date of approval	O
17.02		A Disaster Recovery Plan that includes nightly incremental and monthly full backups	M
17.03		Data changes will be logged, backed up, and maintained for at least 6 months	M
17.04		All system access will be logged, backed up, and maintained for at least 6 months	M
17.05		The program shall produce monthly reports on traffic, leads, unit count progress, property listed, unit listed, and property views	E
17.06		Provide a monthly report of current website usage - stats on the number of property views, number of properties and units listed on the site, and number of contacts generated by the web site. This report should also include the size of the area and population covered by the website's market area	E

17.07		The application provides the administrator a Login History report that will contain the following data:	
	a.	Username	E
	b.	Last login date	E
17.08		The application provides the administrator an Active/Inactive User report that will contain the following data:	
	a.	Username	M
	b.	Last Login Date	M
	c.	User Role	M
	d.	Status (active, inactive)	M
17.09		The application provides the administrator an Inactive Property report that will contain the following data:	
	a.	Username	M
	b.	Last Property Update Date	M
	c.	Unit Zip Code	M
17.10		Provide ability to export all property listings' information in delimited (Excel) format. Provide at least the following data fields:	
	a.	Property ID	E
	b.	Property Address	E
	c.	Property City	E
	d.	Property State	E
	e.	Property Zip	E
	f.	County Name	E
	g.	Marketing Name	E
	h.	Number of Units Reported	E
	i.	Year Built	E
	j.	Latitude	E
	k.	Longitude	E
	l.	Accepts HCV	E
	m.	Minimum rent	E
	n.	Maximum rent	E
	o.	Contains Rent Based On Income	E
	p.	Has a Leasing Office	E
	q.	Manager	E

	r.	Phone Number	E
	s.	Private Notes (from MSHDA Administrator)	E
	t.	Labels	E
17.11		Track property owners establishing property management accounts on the website	E
17.12		All reports will contain a date field parameter to limit the data returned	E
17.13		The application shall provide a list of filtered/sorted data must be able to be exported in the following formats:	E
	a.	Adobe PDF (.pdf)	E
	b.	Microsoft Excel (.xlsx)	E
	c.	Database (Backend)	E

**ATTACHMENT A – Table 2
TECHNICAL SPECIFICATION**

Section	Sub	Technical Requirement	Req.
1.00			
1.01		The Application must function with the following web browser(s) in an INTRANET environment: <ul style="list-style-type: none"> • Microsoft IE 11.0 	M
1.02		The Application must function with the following web browser(s) in an INTERNET environment: <ul style="list-style-type: none"> • Microsoft IE 11.0 	M
1.03		The Application must function with the following desktop Operating System (OS): <ul style="list-style-type: none"> • Windows 7 or newer 	M
1.04		The Application's desktop client install must function on the following standard SOM desktop hardware: Link to SOM Desktop Standard: http://www.michigan.gov/dmb/0,1607,7-150-56355-108233--,00.html	O
1.05		The Application must support the following mobile devices and their Operating System (OS): Link to SOM Handheld Devices: http://www.michigan.gov/dmb/0,1607,7-150-56355-108233--,00.html	E
2.00			
2.01		Provide a logical network diagram that describes how the infrastructure components will meet the functional requirements.	M
2.02		Provide conceptual and logical data-flow diagrams.	M
2.03		Provide a complete installation and configuration documentation library.	E
2.04		Provide a high-level architecture diagram, including logical and physical components.	M

2.05		System documentation must describe error logging and how to access the error logs.	E
2.06		System documentation must describe Disaster Recovery capabilities (including Hot and Cold standby options, licensing implications, and critical vs. non-critical functionality and data).	M
2.07		System documentation must describe any batch processing requirements for the application.	E
2.08		System documentation must describe required application maintenance activities and time frames.	E
2.09		Application/System documentation must provide FAQ and/or Support Information for frequent issues staff/users may encounter.	E
3.00			
3.01		Provide a detailed work plan (in hours) and duration (in days) of a typical installation of the base package, including all modules. Include both SOM and vendor effort.	E
3.02		Provide a high-level project plan outlining activity descriptions, work effort, duration and resources for a typical base-package installation.	E
3.03		Provide a description of the skill sets of all resources required for a typical install of the base package.	E
3.04		Provide a list of functional issues encountered by other users during a typical implementation of your software.	E
3.05		Provide a list of technical issues encountered by other users during a typical implementation of your software.	E

3.06		<p>The application must be remotely deployable and supportable using the following management tool(s): <choose></p> <ul style="list-style-type: none"> • Microsoft's SCCM (SMS) • Marimba 	E
3.07		Provide a detailed list of any browser plug-ins (e.g., ActiveX, Java, Flash) required by the application.	M
3.08		Provide a detailed list of client components (e.g. ODBC, JDBC, Java Beans, other) required by the application, including permission(s) levels.	M
3.09		All agents and bots used for monitoring or maintenance of servers and software must be listed including function, install location, permission level, and resource usage.	M
3.10		Provide a detailed list of any third-party tools required by the application and how they will be supported over the System Development Life Cycle (SDLC).	M
4.00			
4.01		Provide a report of all known current application defects and the timeline for mitigation efforts.	E
4.02		Provide a roadmap for all platform / application enhancements that are planned for the next three years.	E
4.03		The application must follow the SUITE testing processes and documentation of testing and testing types/levels must be provided.	E

4.05		<p>Programming must be done in the following language(s):</p> <ul style="list-style-type: none"> • ASP.Net • C# or VB .NET • JavaScript 	E
4.06		Commercial Off The Shelf (COTS) third-party libraries included within the application must be owned and supportable by the State. Inclusion of any third-party code library or tool must be approved by the SOM Contract Manager or Project Manager.	E
4.07		Custom-developed third-party libraries included within the application must be owned and supportable by the State. Inclusion of any 3rd party code library or tool must be approved by the SOM Contract Manager or Project Manager.	E
4.08		Software developed under contract to SOM must be able to provide a complete change/history log upon request.	E
4.09		<p>Software development must use the following source code version control repositories:</p> <ul style="list-style-type: none"> • Microsoft Team Foundation System 	E
4.10		<p>Software development must adhere to the System Engineering Methodology (SEM) described in the State Administrative Guide (Section 1360):</p> <p>http://www.michigan.gov/documents/dmb/1360.00_281429_7.pdf</p>	M
4.11		System documentation must clearly describe the type of caching, if any, the system employs.	E
5.00			
5.01		The reporting product technology must be compatible with n-Tier architecture (client-server & web).	E

5.02		The reporting product technology must be compatible with the following Server Operating Systems: • (see requirement 10.2)	E
5.03		The reporting tool/system must be certified for use with the VMWare x86 based virtualization platform.	E
5.04		The reporting product technology must be compatible with desktop virtualization.	E
5.05		The reporting product technology must not require any installed component on the user desktop.	E
5.06		The reporting product technology must not require any installed component in the user browser other than the following: • Adobe Acrobat Reader	E
5.07		The reporting product technology must be compatible with the following Reporting tools: • ActiveReports 2.0, 3.0 (standard) • Business Objects (BO) 11 (standard) • Crystal Reports 11 (standard) • MSSQL 2005 Reporting Services (standard) • Oracle Reports 11g (standard)	E
5.08		The reporting product technology must support ad-hoc reporting via custom-built queries.	E
6.00			
6.01		The solution must have a completed MDIT Project Security Plan and Assessment (DIT-0170). Note 1: The DIT-170 should be started during the requirements gathering phase and be authored by MDIT staff. Note 2: Security requirements listed in this section are guidelines only and may be superseded by the DIT-0170.	M

6.02		The solution must have built-in security controls and meet or exceed current SOM security requirements as described in the State Administrative Guide.	M
6.03		Application access must be loggable and have a viewable audit trail(s).	M
6.04		Changes to user permissions must be loggable and have a viewable audit trail(s).	M
6.05		Access to audit trail logs must be able to be restricted to approved administrators.	M
6.06		<p>Application access and changes to application access must log the following information:</p> <ul style="list-style-type: none"> • Date/time • Nature of operation • Name of changed item • Name of who made the change • Before and after value of the changed item 	M
6.07		<p>The following application change event(s) must be logged:</p> <ul style="list-style-type: none"> • Changes to individual permission level • Changes to role membership • Changes to role permissions • Changes to access to application functions 	M
6.08		The System Administrator must be able to control access to audit trail logs.	M
6.09		Access to program libraries (e.g. base code) must be restricted and controlled.	M

6.1		<p>Passwords and User ID's must be able to:</p> <ul style="list-style-type: none"> • Protect sensitive data • Restrict access to only those intended • Meet State/Agency Security Standards • Be encryptable 	M
6.11		<p>User authentication methods, based on risk and severity level, may include:</p> <ul style="list-style-type: none"> • User ID and Passwords • Biometrics • Directories • Smart cards • Single sign-on solutions • Tokens • PKI and Certificates • Voice recognition • Shared secrets • Access control lists and files • Unique business process 	E
6.12		<p>Session State must be stored and maintained in an encrypted manner.</p>	E
6.13		<p>Session State must be stored and maintained in one or more of the following manners: <choose></p> <ul style="list-style-type: none"> • Cookie • URL String • Database 	E
6.14		<p>A software solution must be accessible (and administrable) through the following Virtual Private Network (VPN) : <choose></p> <ul style="list-style-type: none"> • LGNET • Vendor Network • Utnet 	E
6.15		<p>A solution must comply with any of the following application and data processing standards:</p> <ul style="list-style-type: none"> • HIPPA • Sarsbane-Oxsley • PCI-DSS 	E

6.16.		<p>Application and database communication must use the following port(s) and protocol(s):</p> <ul style="list-style-type: none"> • Internet Assigned Number Authority (IANA) registered ports • Microsoft SQL Server 80 / 443 	E
6.17		Client application must support encryption of data both at rest and in motion, in accordance with the data classification.	M
6.18		<p>Applications and systems must adhere to SOM Policy 1350.10 regarding Access to Networks, Systems, Computers, Databases, and Applications:</p> <p>http://www.michigan.gov/documents/dmb/1350.10_184594_7.pdf</p>	M
6.19		<p>Applications and systems must adhere to SOM Policy 1350.20 regarding Access to Protected Data Resources:</p> <p>http://www.michigan.gov/documents/dmb/1350.20_184600_7.pdf</p>	M
6.2		End-user software applications, or components thereof, must not require privileged, super-user or administrator mode in order to function properly.	M
6.21		A security assessment of the purchased application, and its components, must be provided that has been verified by an independent third party.	E
7.00			
7.01		<p>The solution must have a completed MDIT Project Security Plan and Assessment (DIT-0170).</p> <p>Note 1: The DIT-170 should be started during the requirements gathering phase and be authored by MDIT staff.</p> <p>Note 2: Security requirements listed in this section are guidelines only and may be superseded by the DIT-0170.</p>	M

7.02		<p>The application must support the following authentication requirement: <choose></p> <ul style="list-style-type: none"> • Active Directory 2003 • User ID and Passwords • Single sign-on solutions 	E
7.03		<p>Application authentication and authorization must be by individual user. User account information must be stored securely in a database. Users may belong to groups and roles.</p>	M
7.04		<p>The application must enforce the following rules on individual passwords for allowable characters, length and expiration period:</p> <ul style="list-style-type: none"> • Standard Windows characters allowed • Minimum of 8 characters in length • Expires every 90 days • Cannot reuse password for 1 year 	E
7.05		<p>The application must lock out users after three invalid login attempts due to bad passwords.</p>	M
7.06		<p>The application must provide the system administrators with the capabilities to define different roles with different privileges.</p>	M
7.07		<p>The application must provide the system administrators with the capabilities to create groups whose members can be either role-based or individual login account names.</p>	E
7.08		<p>The application must be capable of integrating with the SOM Standards "Identity and Access Management" tool, Novell IDM version 3.5.</p>	E
8.00			

8.01		<p>The solution must have a completed MDIT Project Security Plan and Assessment (DIT-0170).</p> <p>Note 1: The DIT-170 should be started during the requirements gathering phase and be authored by MDIT staff.</p> <p>Note 2: Security requirements listed in this section are guidelines only and may be superseded by the DIT-0170.</p>	M
8.02		<p>Network communication must use the following port(s) and protocol(s): <choose></p> <ul style="list-style-type: none"> • 443 using TCP • Internet Assigned Number Authority (IANA) registered ports • Port 80 • Port 1433 and 1434 for SQL Server 	E
8.03		<p>Client applications must adhere to SOM Policy 1340.00 regarding "Information Security":</p> <p>http://www.michigan.gov/documents/dmb/1340_193162_7.pdf</p>	M
8.04		<p>Applications and systems must adhere to SOM Policy 1350.10 regarding "Access to Networks, Systems, Computers, Databases, and Applications":</p> <p>http://www.michigan.gov/documents/dmb/1350.10_184594_7.pdf</p>	M
8.05		<p>Web interface or browser technology must use TCP/IP protocol through Ports 80 or 443.</p>	E
8.06		<p>Applications and systems must conform with SOM Policy 1345.00 regarding "Network and Infrastructure":</p> <p>http://www.michigan.gov/documents/dmb/1345.00_282982_7.pdf</p>	M

8.07		Application communication between users and system components over the network must be loggable and the log file accessible to the system administrator.	E
8.08		Applications and systems must adhere to SOM Policy 1350.20 regarding "Access to Protected Data Resources": http://www.michigan.gov/documents/dmb/1350.20_184600_7.pdf	M
9.0			
9.01		<p>The solution must have a completed MDIT Project Security Plan and Assessment (DIT-0170).</p> <p>Note 1: The DIT-170 should be started during the requirements gathering phase and be authored by MDIT staff.</p> <p>Note 2: Security requirements listed in this section are guidelines only and may be superseded by the DIT-0170.</p>	M
9.02		Application servers must be hardened prior to placing in production. The hardening process is handled by MDIT Infrastructure Services, in conjunction with OES.	M
9.03		End-user software applications, or components thereof, must not require privileged, super-user or administrator mode in order to function properly.	M
9.04		Servers must have the most recent security patches applied to them and be configured in least privileged mode prior to placing in production in a non-secure environment.	M
9.05		All server-based agents, bots and monitoring components must be listed along with a description of their function, required permission level and resource usage.	M

9.06		Applications and systems must adhere to SOM Policy 1350.10 regarding "Access to Networks, Systems, Computers, Databases, and Applications": http://www.michigan.gov/documents/dmb/1350.10_184594_7.pdf	M
9.07		Applications and systems must adhere to SOM Policy 1350.20 regarding "Access to Protected Data Resources": http://www.michigan.gov/documents/dmb/1350.20_184600_7.pdf	M
10.00			
10.01		The reporting product technology must be compatible with n-Tier architecture (client-server & web).	E
10.02		The application server must support the following Server Operating Systems (OS): • Microsoft Windows 2013 or newer	E
10.03		Application server software components must operate the same, without regard to the hosting platform or OS. They should expose the same functionality and API's regardless of OS.	E
10.04		Application server software component updates must occur at the same time without regard to the hosting platform or OS, unless an exception is granted.	E
10.05		The application tier must be certified for use with the VMWare x86 based virtualization platform.	E
10.06		Systems running on the application server must support horizontal scaling.	E
10.07		Systems running on the application server must support vertical scaling.	E

10.08		All Application components must use the following communication protocols: <ul style="list-style-type: none"> • ODBC • OLE DB 	E
10.09		The application must be capable of sharing the application server with multiple applications.	E
10.1		The software running on the application tier must be coded in the following DTMB supported language: <ul style="list-style-type: none"> • ASP.Net (standard) • C# (standard) • JavaScript (standard) • VB 	E
10.11		End-user software applications, or components thereof, must not require privileged, super-user or administrator mode in order to function properly.	M
11.0			
11.01		The database application must be compatible with the following server operating systems: <ul style="list-style-type: none"> • (see requirement 10.2) 	M
11.02		The database tier must be certified for use with the VMWare x86 based virtualization platform.	E
11.03		The application must use the following database management systems (DBMS) and version: <ul style="list-style-type: none"> • MSSQL Server 2005 (standard) 	M
11.04		The database server must support horizontal scaling by partitioning of tables and clustering of server instances.	E
11.05		The database server must support log shipping to a separate log server.	M
11.06		The database server must support replication and mirroring across multiple servers.	E

11.07		The database server must support flashback capabilities for database, table, etc. for rapid recovery.	O
11.08		The database server must support vertical scaling by the addition of additional CPU's, CPU Cores, and RAM memory.	M
11.09		The database server must support data compression.	E
11.1		The database server must support table and index partitioning across multiple server instances.	O
11.11		The database server must support parallel indexing operations.	O
11.12		The database server must support manual tuning and configuration.	E
11.13		The database server must support automatic tuning and configuration.	E
11.14		The database tier must support a shared connection with connection pooling.	M
11.15		The database must support single-record recovery processes.	E
11.16		The database must support transactions and support transaction rollback.	M
11.17		The database must support encryption at the database table/column level.	M
11.18		The database must restrict access to data through the use of views, queries, roles and groups.	M
11.19		The database must provide data archival functionality.	E
11.2		The database must support assured record destruction by secure and permanent record deletion.	E
11.21		The database must be able to operate in an n-Tier server architecture.	M

11.22		The database structure must be extensible, allowing the addition of new tables, new columns and new objects.	E
11.23		The database must support pessimistic and optimistic record-locking strategies.	M
11.24		The database must support table and row level locking during read/write operations.	E
11.25		The database server must support heterogeneous cross-DBMS and distributed transactions.	O
11.26		The database transaction strategies must be configurable, allowing growth, shrinkage and backup-recovery.	M
11.27		The database must not require components that are not part of the default database licensing model for supporting any functionality.	E
11.28		The database must allow full text indexing and search.	E
11.29		The database must provide support for spatial data.	E
11.3		The database must provide support for XML data.	E
11.31		The database server must support the following application development frameworks: (see section 4.4 - Product Development)	M
11.32		The database server must support auditing and logging for DML events (insert, update, delete).	M
11.33		The database server must support auditing and logging for DCL events (grant, revoke, deny).	M
11.34		The reporting product technology must be compatible with n-Tier architecture (client-server & web).	M

11.35		The database must not require users to have elevated database privileges/accounts for normal operation.	M
11.36		The database server must support licensing per CPU core.	E
11.37		The database server must support licensing per CPU socket.	E
11.38		The database server must support licensing per seat.	E
12.0			
12.01		The Web server must support the following Operating Systems (OS): • (see requirement 10.2)	E
12.02		The Web Server components must operate the same without regard to the hosting platform or OS.	E
12.03		The Web Server component updates must occur at the same time without regard to the hosting platform or OS.	E
12.04		The web server for this application must be: • MS IIS 2013 or greater (standard)	E
12.05		The application must be capable of sharing a web server with multiple applications.	E
12.06		The Web Server must support horizontal scaling.	E
12.07		The Web Server must support vertical scaling.	E
12.08		The application tier must be certified for use with the VMWare x86 based virtualization platform.	E
12.09		The application should support clustering and/or load balancing across several servers.	E
12.1		The reporting product technology must be compatible with n-Tier architecture (client-server & web).	E

13.0			
13.01		The application's minimum technology requirements, including Operating System (OS) versions, vendor versions, and release level of each product, must be provided.	E
13.02		<p>A detailed network/server diagram must be provided illustrating the relative architecture of the proposed system. It should include:</p> <ul style="list-style-type: none"> • Network security zones and firewalls • Server types and network components (e.g., switches) • Ports and protocols used to cross security zones • How users will access the system • Clustering of servers 	M
13.03		<p>The solution/application must utilize the features and capabilities of the SOM enterprise data storage services for the following data storage needs:</p> <ul style="list-style-type: none"> • Storage Area Network (SAN) • Network Attached Storage (NAS) • Content Addressable Storage (CAS) 	M
13.04		The solution/application must support installation and operation in one or more disparate hosting centers. Fail-over from one hosting center to another must be possible without exceeding parameters specified in the Service Level Agreement (SLA).	M
13.05		<p>A Service Level Agreement (SLA) must be in effect for the solution/system specifying, at a minimum, the following:</p> <ul style="list-style-type: none"> • Criticality Level (Critical, High, Medium) • Recovery Point Objective (time in hours) • Recovery Time Objective (time in hours) 	M

13.06		The solution/application must support distributed deployment of application components and database tier components (n-Tier architecture).	E
13.07		The solution/application must have an approved Enterprise Architecture (EA) Solution Assessment, prior to production.	O
13.08		Provide a technology roadmap for the proposed system showing a five (5) year plan for migrating to new software versions and when to de-implement dated versions as they reach end of life.	E
13.09		Provide conceptual and logical application data-flow models.	E
13.1		Provide a logical network diagram that describes how the infrastructure components will meet the functional requirements.	M
13.11		Provide a technology roadmap for the proposed system showing a five (5) year plan for new software version releases, support window, and sun setting.	E
13.12		Provide a high-level architecture diagram, including logical and physical components.	M
13.13		Systems operating on an application server must interoperate with CA Unicenter monitoring agents.	M
13.14		Systems operating on an application server must interoperate with Veritas Backup and Recovery agents.	M
13.15		The reporting product technology must be compatible with n-Tier architecture (client-server & web).	E
14			

14.01		<p>System integration must support the following method(s):</p> <ul style="list-style-type: none"> • API • Web Services • SOAP • ODBC • JDBC • Plug-Ins • OLEDB 	E
14.02		<p>An Application Programming Interface (API) must be supplied and supported for the following technologies:</p> <ul style="list-style-type: none"> • .NET (standard) 	E
14.03		<p>Provide pre-defined connector(s) to the following industry standard data source(s):</p> <ul style="list-style-type: none"> • Microsoft 	E
14.04		<p>Connectivity to the following relational database(s) must be provided and supported:</p> <ul style="list-style-type: none"> • (see section 11.5) 	E
14.05		<p>The solution must be able to import and export data to and from the following external source(s):</p> <ul style="list-style-type: none"> • Export maybe not import (service will create data using online forms) 	E
14.06		<p>The ability to export data in the following output formats must be available:</p> <ul style="list-style-type: none"> • PDF • Microsoft excel 	E
14.07		<p>The reporting product technology must be compatible with n-Tier architecture (client-server & web).</p>	E

14.08		The ability to make use of the following external services must be available: • Web Service API for data download	E
15			
15.01		Software licensing must be inclusive for all packages included in the solution, unless explicitly listed and detailed.	E
15.02		Application/System documentation must provide access to FAQ and/or Support Information for frequent issues administrative staff may encounter.	E
15.03		Documentation must indicate recommended staffing requirements to administer and support the system.	E
15.04		Documentation must provide backup/recovery information using the SOM Veritas solution, including information on hot/online backups.	E
15.05		A system maintenance window must be designed into the application which will allow the system to be taken off-line for updates, upgrades and maintenance.	E
15.06		Documentation describing how to take the system off-line for maintenance, updates and upgrades must be provided.	E
15.07		Documentation must provide the anticipated frequency and requirements of patches (releases, break-fix, 0-day), minor, and major releases.	E
15.08		Documentation must provide information on certification/compatibility with OS patches, Service Pack, and upgrade paths.	E

15.09		Documentation must address upgrade paths and procedures for each component/tier.	E
15.1		Provide a complete configuration and set-up documentation library.	E
15.11		System documentation must clearly describe any special requirements (such as middleware, Operating System (OS), hardware, etc.) that could affect the capabilities or performance of the system.	E
15.12		System documentation must clearly describe all critical factors in sizing or configuring the application (e.g., number of concurrent users, specific transaction volumes, number of products, number of layers in the product hierarchy, etc.).	E
16			
16.01		The application must provide performance-optimization capabilities.	E
16.02		The application must have the capability to handle large-volume batch processing via multi-threading.	E
16.03		The application must maintain optimum performance over both Wide Area Network (WAN) and Local Area Network (LAN).	E
16.04		The application must maintain optimum performance over Local Area Network (LAN).	E
16.05		System documentation must clearly describe all versions of the package that are deployed for different scaling situations.	E

16.06		System documentation must clearly describe any special requirements (such as middleware, Operating System (OS), hardware, etc.) that could affect the capabilities or performance of the system.	E
16.07		System documentation must clearly describe what support will be provided to the State for performance optimization activities.	E
16.08		System documentation must clearly describe the type of caching, if any, the system employs.	E
16.9		System documentation must clearly describe all activities that affect optimum performance such as service recycling, rebooting, or batch jobs and their frequency.	E
16.10		The system must meet performance benchmark times for: <ul style="list-style-type: none"> • Page refresh in under three seconds • Database query execution in under two seconds 	E
17.00			
17.01		All known security vulnerabilities must be addressed in accordance with industry-accepted system hardening standards. Industry-accepted standards include: <ul style="list-style-type: none"> • SysAdmin Audit Network Security (SANS) • National Institute of Standards Technology (NIST) • Center for Internet Security (CIS) • SOM Standards 	M
17.02		All unnecessary and unsecure services and protocols (those not directly needed to perform the device's specified function) are disabled.	M

17.03		System security parameters must be configured to prevent misuse (see 17.1 for guidance).	M
17.04		<p>All unnecessary functionality is removed, such as:</p> <ul style="list-style-type: none"> • Scripts • Drivers • Features • Subsystems • File Systems • Unnecessary Web Servers 	M
18.0			
18.01		Software applications must be developed in accordance with PCI DSS (for example, secure authentication and logging) and based on industry best practices. Information security must be incorporated throughout the Systems Development Life Cycle (SDLC).	M
18.02		<p>All security patches and system and software configuration changes must be tested before deployment, including but not limited to:</p> <ul style="list-style-type: none"> • All input must be validated to prevent such things as cross-site scripting, injection flaws and malicious file execution. • Proper error handling must be incorporated into the software. • Data at rest must use secure cryptographic storage. • Data in motion must use secure communications. • Role-based access control (RBAC) must be used to control and audit user actions. 	M
18.03		There must be separate development, test and production environments.	M

18.04		There must be separation of duties between development, test and production environments.	M
18.05		Production data (live Primary Account Numbers - PANs) are not used for testing or development purposes.	M
18.06		All test data and accounts must be removed before production systems become active.	M
18.07		All custom and developer accounts, user IDs, and passwords must be removed before applications become active or are released to agencies.	M
18.08		A code review must be performed of custom code prior to release to production or agencies, in order to identify any potential coding vulnerabilities.	M
18.09		All web applications (internal, external, and web administrative access to applications) must be developed based on secure coding guidelines such as the Open Web Application Security Project Guide. http://www.owasp.org	M

18.10		<p>Prevention of common coding vulnerabilities must be covered in software development processes, including:</p> <ul style="list-style-type: none"> • Cross-side scripting (XSS). • Injection flaws, particularly SQL injection. Also consider LDAP and Xpath injection flaws. • Malicious file execution. • Unsecure direct object references. • Cross-site request forgery (CSRF). • Information leakage and improper error handling. • Broken authentication and session management. • Unsecure cryptographic storage. • Unsecure communications. • Failure to restrict URL access. 	M
19.0			
19.01		Only MDIT approved personnel may add, delete, or modify user IDs, credentials, and other identifier objects on systems containing PCI data.	M
19.02		A users identity must be verified before performing a password reset.	M
19.03		First-time passwords must be set to a unique value for each user and each user change this initial password immediately upon first use.	M
19.04		Access rights for any terminated user must be immediately revoked.	M
19.05		Inactive user accounts must be removed or disabled at least every 90 days.	M
19.06		All accounts used by vendors for remote maintenance must be enabled only during the time period needed and remain disabled otherwise.	M

19.07		Password procedures and policies must be communicated to all users who have access to cardholder data.	M
19.08		Group, shared, or generic accounts and passwords are prohibited.	M
19.09		User passwords must be changed at least every 90 days.	M
19.10		All passwords must have a minimum password length of at least eight (8) characters.	M
19.11		All passwords must contain a mix of both numeric (0-9) and alphabetic (a-z, A-Z) characters. Optional non-alphanumeric characters (e.g. !\$#%) should be allowed.	M
19.12		A new individual password for a specific user account must be different from any of the last four passwords for that user account.	M
19.13		Repeated access attempts must be limited by locking out the user after six (6) consecutive unsuccessful attempts.	M
19.14		The user lockout duration must be set to a minimum of 30 minutes or until administrator re-enables the user ID.	M
19.15		A user must re-enter his or her password to re-activate the session after more than 15 minutes of idle time.	M
19.16		All access to any database containing cardholder data must be authenticated (this includes access by applications, administrators, and all other users.).	M
19.17		A password cannot at any time be the same as a user ID.	M
20.0			

20.01		Commercial Off The Shelf (COTS) third-party libraries included within the application must be owned and supportable by the State. Inclusion of any third-party code library or tool must be approved by the SOM Contract Manager or Project Manager.	M
20.02		COTS software which handles credit card data or transactions must be certified to be Payment Card Industry - Data Security Standard (PCI-DSS) and PCI Payment Application - Data Security Standard (PA-DSS) compliant. Certification must be provided upon request.	M
20.03		COTS software must have maintenance and support available from the developer, vendor or an approved 3 rd party.	M
20.04		COTS software providers must make available for inspection the End User License Agreement (EULA) prior to purchase or contract signing.	M
20.05		End User License Agreements (EULA) must be approved by DMB Purchasing or MDIT Enterprise Project Management Office prior to purchase or contract signing.	M
20.06		COTS software not already listed on the Enterprise Architecture Roadmaps must have an approved EA Solution Assessment completed prior to use or implementation.	M
21.0			
21.01		The information technology network and infrastructure must conform with SOM Policy 1345.00 regarding "Network and Infrastructure":	M
		SOM Technical Policies	-

21.02		The solution must contain values for projected capacity and special needs requirements covering all aspects of data transport & security across the information technology network and infrastructure.	M
21.03		The solution must address projected capacity requirements for all aspects of the information technology network and infrastructure.	M
21.04		The solution must conform with the SOM “MDIT State-wide Telecommunication Infrastructure Facility Standard”:	M
		Telecom Infrastructure Facility Standard	-
21.05		The solution must conform with the SOM “MDIT State-wide management process for self-installed Managed Local Area Network (LAN) cabling”:	M
		Managed LAN Cabling Standard	-

EXHIBIT B COST TABLES

Presented below is the NMA team's proposed pricing. Note that any customizations or enhancements to the software will be charged at an hourly rate of \$125.00.

Description	Year 1	Year 2	Year 3	Option 1	Option 2	Option 3
Implementation	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Licensing	\$66,000	\$68,500	\$71,000	\$73,500	\$76,000	\$78,500
Support & Maintenance	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Onsite Technical Professional Services	\$175.00	\$175.00	\$175.00	\$175.00	\$175.00	\$175.00
Remote Technical Services	\$125.00	\$125.00	\$125.00	\$125.00	\$125.00	\$125.00
Initial Live Training & Unlimited Web-Based Training	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00