STATE OF MICHIGAN
ENTERPRISE PROCUREMENT

Department of Technology, Management, and Budget
525 W. ALLEGAN ST., LANSING, MICHIGAN 48913
P.O. BOX 30026 LANSING, MICHIGAN 48909

CONTRACT CHANGE NOTICE

Change Notice Number **5**
to
Contract Number **071B0200070**

MEDIWARE INFORMATION SYSTEMS, INC.	
11711 West 79th Street	
Lenexa, KS 66214	
Larry Hughes	
913-307-1075	
larry.hughes@mediware.com	
*******9324	

PROGRAM MANAGER	Kimberly Koppsch-woods	MDHHS
	517-241-3314	
	Koppsch-WoodsK@Michigan.gov	
CONTRACT ADMINISTRATOR	Simon Baldwin	DTMB
	(517) 284-6997	
	baldwins@michigan.gov	

DCH PHARMACY SYSTEM

INITIAL EFFECTIVE DATE	INITIAL EXPIRATION DATE	INITIAL AVAILABLE OPTIONS	EXPIRATION DATE BEFORE CHANGE(S) NOTED BELOW
November 9, 2009	December 6, 2014	2 - 2 Year	December 6, 2016

PAYMENT TERMS	DELIVERY TIMEFRAME

ALTERNATE PAYMENT OPTIONS			EXTENDED PURCHASING	
☐ P-Card	☐ Direct Voucher (DV)	☐ Other	☐ Yes	☒ No

MINIMUM DELIVERY REQUIREMENTS

OPTION	LENGTH OF OPTION	EXTENSION	LENGTH OF EXTENSION	REVISED EXP. DATE
☒	1 - Year	☐		December 6, 2016

CURRENT VALUE	VALUE OF CHANGE NOTICE	ESTIMATED AGGREGATE CONTRACT VALUE
$3,722,871.00	$0.00	$3,722,871.00

DESCRIPTION

Effective 12/6/2016, The third option year for this Contract is hereby exercised, utilizing $210,095.00 existing Contract funds. Revised Contract pricing is hereby attached and replaces pricing set forth in Change Notice 3 for the support costs of licensed software. All other terms, conditions specifications and pricing remain the same. Per Contractor and Agency agreement, and DTMB Procurement approval.

Revised Pricing

Item	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
WORx/WORx PO	$23,136	$24,293	$25,507	$6,971	$26,783	$28,122	$29,528	$31,004
MediMAR	$25,305	$26,570	$27,899	$7,624	$29,294	$30,758	$32,296	$33,911
MediCOE	$21,690	$22,775	$23,913	$6,535	$25,109	$26,364	$27,683	$29,067
MediREC	$2,169	$2,277	$2,391	$654	$2,511	$2,636	$2,768	$2,907
Mediware Licensed Software Subtotal	**$72,300**	**$75,915**	**$79,711**	**$21,784**	**$83,696**	**$87,881**	**$92,275**	**$96,889**
Informix	$32,136	$33,743	$35,430	$9,683	$37,201	$39,062	$41,015	$43,065
SQR	$1,116	$1,172	$1,230	$336	$1,292	$1,357	$1,424	$1,496
Infomaker	$1,440	$1,512	$1,588	$434	$1,667	$1,750	$1,838	$1,930
FDB	$38,754	$40,692	$42,726	$11,677	$44,863	$47,106	$49,461	$51,934
Enexity	$563	$591	$621	$170	$652	$684	$719	$754
Sublicensed Software Subtotal	**$74,009**	**$77,709**	**$81,595**	**$22,299**	**$85,675**	**$89,958**	**$94,456**	**$99,179**
Subtotal (Items in Contract)	**$146,309**	**$153,624**	**$161,306**	**$44,083**	**$169,371**	**$177,840**	**$186,731**	**$196,068**
Additional Informix	**$6,240**	**$6,552**	**$6,880**	$1,880	$7,224	$7,585	$7,964	$8,362
Additional WORx Workstation Licenses	**$5,738**	**$6,025**	**$6,326**	$1,729	$6,642	$6,975	$7,323	$7,689
EMBRS/ADT Interface (MM00716A)					$1,890	$1,985	$2,084	$2,188
EMBRS/Billing Interface (MM00716A)					$1,890	$1,985	$2,084	$2,188
WORx ADT Custom Interface (MM00774)					$3,544	$3,721	$3,907	$4,103
Old Pricing	**$158,287**	**$166,201**	**$174,511**	**$47,692**	**$187,017**	**$196,368**		
New Total	**$158,287**	**$166,201**	**$174,511**	**$47,692**	**$190,562**	**$200,089**	**$210,095**	**$220,598**

Contract Period	**9/1/11 to 8/31/2012**	**9/1/12 to 8/31/2013**	**9/1/13 to 8/31/2014**	**9/1/14 to 12/6/2014**	**12/7/2014 to 12/6/2015**	**12/7/2015 to 12/6/2016**	**12/7/2016 to 12/6/2017**	**12/7/2017 to 12/6/2018**

Form No. DTMB-3521 (Rev. 10/2015)
AUTHORITY: Act 431 of 1984
COMPLETION: Required
PENALTY: Contract change will not be executed unless form is filed

STATE OF MICHIGAN

DEPARTMENT OF TECHNOLOGY, MANAGEMENT & BUDGET

PROCUREMENT

525 W. ALLEGAN STREET
LANSING, MI 48933

P.O. BOX 30026
LANSING, MI 48909

CHANGE NOTICE NO. 4
to
CONTRACT NO. 071B0200070
between
THE STATE OF MICHIGAN
and

NAME & ADDRESS OF CONTRACTOR	PRIMARY CONTACT	EMAIL
Mediware Information Systems, Inc.	Larry Hughes	Larry.Hughes@mediware.com
11711 West 79th Street	PHONE	CONTRACTOR'S TAX ID NO. (LAST FOUR DIGITS ONLY)
Lenexa KS, 66214	913-307-1075	*******9324

STATE CONTACTS	AGENCY	NAME	PHONE	EMAIL
PROGRAM MANAGER / CCI	DTMB	Kim Koppsch-Woods	(517) 241-3314	Koppsch-WoodsK@Michigan.gov
CONTRACT ADMINISTRATOR	DTMB	Simon Baldwin	(517) 284-6997	BaldwinS@michigan.gov

CONTRACT SUMMARY			
DESCRIPTION: DHHS Pharmacy System			
INITIAL EFFECTIVE DATE	INITIAL EXPIRATION DATE	INITIAL AVAILABLE OPTIONS	EXPIRATION DATE BEFORE CHANGE(S) NOTED BELOW
November 9, 2009	December 6, 2014	2 - 2 Year	December 6, 2016
PAYMENT TERMS		DELIVERY TIMEFRAME	
ALTERNATE PAYMENT OPTIONS			EXTENDED PURCHASING
☐ P-card ☐ Direct Voucher (DV) ☐ Other			☐ Yes ☒No
MINIMUM DELIVERY REQUIREMENTS			
N/A			

DESCRIPTION OF CHANGE NOTICE

EXERCISE OPTION?	LENGTH OF OPTION	EXERCISE EXTENSION?	LENGTH OF EXTENSION	REVISED EXP. DATE
☐	N/A	☐	N/A	.

CURRENT VALUE	VALUE OF CHANGE NOTICE	ESTIMATED AGGREGATE CONTRACT VALUE
$3,722,871.00	$ 0.00	$3,722,871.00

DESCRIPTION: Effective April 8, 2016, the following amendment is hereby incorporated into the Contract per the attached Statement of Work (SOW) and will use existing Contract funds for enhancements in the amount of $74,625.00. Please note, the Program Manager has been changed to Kimberly Koppsch-Woods, the Contract Administrator has been changed to Simon Baldwin and Mediware's Project Manager has been changed to Larry Hughes. All other terms, conditions, specifications, and pricing remain the same per Contractor and Agency agreement, and DTMB Procurement approval.

MICHIGAN DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
CONTRACT CHANGE NOTICE ATTACHMENT
FOR THE
STATEMENT OF WORK
BETWEEN
THE STATE OF MICHIGAN
AND
MEDIWARE INFORMATION SYSTEMS, INC.

Project Titles: (1) Loading the Production Database Server and Resolving Performance Issues; (2) Charge on Administration (COA) Functionality in the Worx Medication Management Suite; and (3) WORx PO Module Implementation, Configuration, and Support.	**Expiration date** December 6, 2016 (optional years remain)
Requesting Agency: Michigan Department of Health and Human Services (DHHS)	**Request Date:** 5/3/2016
Agency Program Manager: Cynthia Kelly	**Phone:** (517) 335-0263
DTMB Program Manager: Kimberly Woods	**Phone:** (517) 284-7156

- This Statement of Work ("SOW") is made a part of Change Notice No. 4 to Contract No. 071B0200070 (Contract) between the State of Michigan (State or SOM) and Mediware Information Systems, Inc. (Mediware or Contractor) effective as of the last date set forth on the signature page of this Agreement. **NOW THEREFORE**, the Parties agree as follows:

1. OVERVIEW AND DEFINITIONS

1.01 The recitals set forth above are incorporated into this SOW.

1.02 All duties and obligations described herein will become part of existing Contract. All terms, conditions, and specifications contained in the existing Contract must remain in full force and effect.

1.03 **"Days"** means calendar day unless specifically stated otherwise in the Contract.

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

1.05 **"Environment"** means the combination of server hardware and software to support a functional technical solution. The operating system for this Project must include three environments:

testing (allows for Contractor and State testing), production (daily user environment), and disaster recovery (fail over should the production environment become unavailable).

1.06 **"Good Faith"** means honesty in fact and the observance of reasonable commercial standards of fair dealing.

1.07 **"Implementation"** means activities required to install the software, databases, and/or data that comprise the product onto the hardware platform. User training is included as part of an Implementation.

1.08 **"Michigan Department of Community Health", "Community Health", and "DCH"** in this SOW and the existing Contract mean the Michigan Department of Health and Human Services. Under the recently effectuated State Executive Order No. 2015–4, the entities formerly known as the separate Michigan Department of Community Health ("MDCH" or "DCH") and the Michigan Department of Human Services ("MDHS" or "DHS") have merged to become one department named the Michigan Department of Health and Human Services ("MDHHS" or "DHHS").

1.09 **"Operational"** means system availability in the production environment.

1.10 **"Project Management"** means the Contractor's obligation to facilitate communications between the State's DTMB and DHHS Program Managers, State personnel, and Contractor personnel.

1.11 **"Risk"** means an unknown circumstance or event that, if it occurs, may have a positive or negative impact on the project and/or Contractor's services and deliverables.

1.12 **"Subcontractor"** means any company or entity Contractor delegates performance of a portion of the services or deliverables to. Subcontractors is broadly defined to include any entity working to forward Contractor's business. The term subcontractors does not include independent contractors engaged by Contractor solely in a staff augmentation role.

1.13 **"Support"** means Contractor's resolution of any and all concerns from the DTMB Program Manager regarding Project services and deliverables.

1.14 **"Task"** means a service and/or deliverable from Contractor.

1.15 **"Technical Consultant"** means the subject matter expert on the Mediware application package.

1.16 **"Testing"** includes creation and execution of a DTMB-approved Testing Plan. Testing, at a minimum, must include Unit, Integration, and UAT testing.

1.17 **"Training"** must include a graded, online test for all trainees that is prepared by the Contractor. Before any test is administered by the Contractor, the test questions and answers must be approved by the DTMB Program Manager. Contractor may, in its discretion, choose to provide online testing via WebX or another online platform. Contractor must grade all tests and return the results to the DTMB Program Manager.

1.18 Any terms or concepts in this SOW that are not defined in the Contract are governed by their plain meaning.

2. PROJECT OBJECTIVES AND SCOPE OF WORK

2.01 Pursuant to this SOW and the existing Contract, Contractor must execute the following three Projects:

1) Loading the Production Database Server and Resolving Performance Issues;

2) Charge on Administration (COA) Functionality in the Medication Management Suite; and

3) WORx PO Module Implementation, Configuration, and Support.

3. CONTRACTOR'S SERVICES AND DELIVERABLES FOR LOADING THE PRODUCTION DATABASE SERVER AND RESOLVING PERFORMANCE ISSUES

3.01 Contractor agrees to provide services and deliverables to create an Operational production environment for use by State personnel. This includes all Mediware application modules that the State has licensed from Mediware for use within the Mediware system.

3.02 Contractor must lead in implementing and supporting production database server functionality to Support the Mediware application within the scope of the Contract and this SOW. These services and deliverables include, but are not limited to, design, configuration, and implementation, Support of the technical architecture solution, consultation, and Project management.

3.03 Contractor's tasks include, but are not limited to the following:

1) Assist the State with all technical Project attributes within the scope of the existing Contract and this SOW as directed by the DTMB Program Manager.

2) Lead in the Project Management and implementation of the production database functionality.

3) Lead in the creation of a Project Management Plan and Schedule.

4) Re-install the production database system, software, and data.

5) Perform all necessary testing to ensure connectivity is live on the server and to verify there are no performance issues after installation.

6) Contractor will assist the State in identifying, troubleshooting, and resolving performance issues for 30 days after implementation at no additional cost to the State. If the State identifies performance issues more than 30 days after the implementation date, the State will utilize the time and materials rates for resources stated herein.

7) Provide consulting and Support for the pre go-live, go-live, and post go-live Support environments.

8) Lead in synchronizing the servers and mirror the HDR Box with the Production Box.

9) Update the DTMB and DHHS Program Managers on any and all known defects as soon as reasonably possible.

3.04 Contractor's preliminary, high-level Project Schedule for this Project is estimated as follows:

Task	Duration (Hours)	Resource Title	Anticipated Start Date (Month, Year)
Kick Off Call	3	(1) Project Manager (2) Implementation Consultant (3) Technical Consultant	May 17, 2016
Server Re-installation	6	Technical Consultant	May 23, 2016
Performance Issue(s) Resolution	24	(1) Implementation Consultant (2) Technical Consultant	May 24, 2016
Verify Production Server Readiness	1	Technical Consultant	June 7, 2016
Production Server Go-Live	12	Technical Consultant	June 8, 2016
HDR Server Synchronization	6	Technical Consultant	June 10, 2016

4. CONTRACTOR'S SERVICES AND DELIVERABLES FOR THE CHARGE ON ADMINISTRATION FUNCTIONALITY

4.01 Contractor must provide services and deliverables to create an Operational Charge on Administration (COA) functionality in the Medication Management Suite for use by State personnel.

4.02 Contractor must lead in implementing and Supporting COA functionality to support the Mediware system within the scope of the Contract and this SOW. These services and deliverables include, but are not limited to configuration, implementation, training, consultation, and Project management.

4.03 Contractor must provide a Technical Consultant to lead in the configuration, implementation, and Support of the Services and Deliverables delineated herein and in the existing Contract.

4.04 The Services and Deliverables listed herein in Section 4 for the COA Project apply to all five State-owned hospitals.

4.05 Contractor's Tasks include, but are not limited to the following:

1) Assist the State with all Tasks within the scope of the Contract and this SOW as directed by the DTMB Program Manager.

2) Lead in the consultation, Project management, and implementation of the COA functionality.

3) Contractor must provide Training and Support to DHHS pharmacy staff to go live with the COA functionality in all five State-owned hospitals. Contractor must conduct five total trainings for COA usage: one in each of the five State-owned hospitals. After the approval of Contractor's metric-based Training Plan by both the DTMB and DHHS Program Managers, Contractor must provide training to State personnel per the Project Schedule.

4.06 Contractor's preliminary, high-level Project Schedule for this Project is estimated as follows:

Task	Duration (Hours)	Resource Title	Anticipated Start Date (Month, Year)
Kick Off Call	1	(1) Project Manager (2) Implementation Consultant (3) Technical Consultant	June 13, 2016
Enable COA Functionality	1	Implementation Consultant	June 14, 2016
Application Administrator Training	10	Implementation Consultant	June 20, 2016
Application Testing	24	Implementation Consultant	June 27, 2016
Go-Live Support	4	(1) Implementation Consultant (2) Technical Consultant	July 11, 2016

5. CONTRACTOR'S SERVICES AND DELIVERABLES FOR WORX PO MODULE IMPLEMENTATION, CONFIGURATION, AND SUPPORT

5.01 Contractor must provide services and deliverables to implement, configure, and Support an Operational WORx PO module for use by State personnel. Contractor must ensure the WORx PO application Supports the Mediware application within the scope of the Contract and this SOW. These services and deliverables include, but are not limited to, the technical architecture solution, training, consultation, and Project management.

5.02 Contractor must provide a Technical Consultation to lead in the development, implementation and Support of the Services and Deliverables delineated herein and in the existing Contract.

5.03 Contractor's tasks include, but are not limited to the following:

1) Contractor must implement the WORx 2014R3 version currently under license by the State in each of the five State-owned hospitals.

2) Contractor must utilize the State Unified Information Technology Environment ("SUITE") process as detailed in Contract Section 1.301. All SUITE forms must be approved by the DTMB Program Manager.

3) Contractor must lead in the creation and continuous update of a Project Schedule that contains milestones and deadlines. The DTMB Program Manager must approve all Project Schedule proposals. Contractor's Project Schedules must include, but are not limited to, dates for installation and implementation. The State must approve all changes to the Project Schedule that may occur because of implementation adjustments, system dependencies or any other business need.

4) For each of the five State-owned hospitals, Contractor must assist the State as necessary with performing the load of the AmerisourceBergen Catalog (ABC) file for inventory control in the WORx PO system. Load assistance will be provided at no additional cost to the State. Contractor must ensure that the ABC Catalog is fully incorporated into the WORx PO system.

5) Contractor must complete installation to production of the WORx PO system for the each of the five State-owned hospitals. Tasks include, but are not limited to, implementing, executing and Supporting the WORx system's Inventory and Billing functions.

6) Contractor must provide training and Support to DTMB staff to facilitate report development and application maintenance. Contractor must create and develop a metric-based Training Plan to provide training and mentoring to State personnel for WORx PO application optimization and utilization. After the approval of Contractor's Training Plan by both the DTMB and DHHS Program Managers, Contractor must provide training to State personnel per the Project Schedule.

7) Contractor must provide Training and Support to DHHS pharmacy staff to facilitate application and reporting usage. Contractor must create and develop a metric-based Training Plan to provide Training and Support to DHHS pharmacy staff and personnel for WORx PO application utilization. After the approval of Contractor's Training Plan from both the DTMB and DHHS Program Managers, Contractor must provide training to DHHS pharmacy staff and personnel per the Project Schedule.

8) Contractor must perform five total Trainings of pharmacy staff: one at each of the five State-owned hospitals. Contractor may, in its discretion, choose to create webinar-based Trainings. Contractor may utilize another remote method of training if it is mutually agreed upon by the parties.

9) Contractor will provide training and consultation with WORx PO set-up and troubleshooting so that end users can manage inventory.

10) Assist the State with all Tasks within the scope of the existing Contract and this SOW as directed by the DTMB Program Manager.

11) Identify and resolve all errors and reporting issues related to WORx PO as part of Contractor's services and deliverables.

5.04 Contractor's preliminary, high-level Project Schedule for this Project is estimated as follows:

Task	Duration (Hours)	Resource Title	Anticipated Start Date (Month, Year)
Kick Off Call	3	(1) Project Manager (2) Implementation Consultant (3) Technical Consultant	July 18, 2016
WORxPO Installation and Configuration	10	Technical Consultant	August 1, 2016
WORxPO Training	50	Implementation Consultant	August 15, 2016
System Build/File Building	100	Technical Consultant	August 24, 2016
Catalog Configuration	16	(1) Implementation Consultant (2) Technical Consultant	August 24, 2016
Application Testing and Catalog Validation	44	(1) Implementation Consultant (2) Technical Consultant	August 24, 2016
WORxPO Go-Live Support	65	(1) Implementation Consultant (2) Technical Consultant	September 12, 2016
Post Go-Live Support	12	(1) Implementation Consultant (2) Technical Consultant	October 3, 2016

6. CONTRACTOR'S SERVICES AND DELIVERABLES FOR REPORTING AND QUALITY CONTROL

6.01 **Monthly Progress Report for Each Project.** A monthly Progress Report for each of the three Projects described herein must be submitted to the DTMB and DHHS Program Managers throughout each Project term. Contractor must combine all Project Reports into a single document. The Report may be submitted with Contractor's billing invoice.

6.02 **Monthly Progress Report Details.** Each monthly Progress Report must contain the following information:

1) **Hours.** Contractor must indicate the number of hours expended for each project by resource name during the past month with a summary of activities, hours allocated to each effort, and the cumulative total of hours expended to date for the Project. Also state whether the remaining hours are sufficient to complete each Project.

2) **Accomplishments.** Contractor must state the tasks completed during the current month's reporting period. These include, but are not limited to the following Monthly Progress Report items:

    a) Reports on any application defects or errors

    b) Issue and Resolution Log Report

    c) Recommendations for application changes

    d) Change Log Reports

    e) Defect Log Reports

    f) Quality Assurance Report

    g) Root Cause Analysis Report explaining the root cause of any and all errors

    h) Project Management Plan and Schedule

3) **Funds.** Contractor must state the amount of funds expended during the current reporting period, and the cumulative total to date for each Project for each project.

4) **Projected Accomplishments.** Contractor must describe the activities projected to be accomplished during the next month's reporting period.

5) **Issues.** Contractor must describe any issues, risks, changes, real or perceived, and recommend resolutions for each project.

6.03 Unless otherwise requested by the DTMB Program Manager, Contractor may name certain Reports from the above-named list in Section 6.02(2) as "not applicable" for a particular Project, as appropriate. Contractor must provide additional information for any named item upon the request of the DTMB Program Manager.

6.04 The Contract Section 1.000 must be amended to add the following language:

1) **Quality Control Procedures.** As part of a good faith effort to satisfy all Contract requirements timely and accurately, Contractor will establish and maintain written Quality Control Procedures ("QC Procedures"). QC Procedures must be based on Contract requirements, including, but not limited to, the Statement of Work ("SOW"), project-level standards, benchmarks, and other protocols mutually determined between the State and Contractor. QC Procedures must incorporate the use of both automated and manual quality control tools so that the Contractor can continuously monitor the timeliness and accuracy of all billings, services, and deliverables to the State.

2) **Updates to Quality Control Procedures.** Contractor will deliver a copy of its QC Procedures to the DTMB and DHHS Program Managers within 30 days after this SOW becomes effective. Contractor must provide any updates or changes to QC Procedures to the DTMB and DHHS Program Managers no later than 30 days after the update or change is made.

3) **Quality Assurance Review of All Deliverables.** Contractor will ensure each Contract deliverable undergoes a thorough quality assurance review and approval process before its release to the State. These items include, but are not limited to, all testing, small projects process documents, billings, and correspondence. Contractor's staff must thoroughly review all deliverable and service requests from the State to ensure all requirements were completed. Contractor's Project Manager must perform a final quality control review and is ultimately responsible for the overall quality of all billings, recoupments, and deliverables.

4) **Monthly Quality Assurance Report.** Contractor's Quality Assurance Report must contain a summary of each of Contractor's quality assurance reviews during the previous month. Contractor's Monthly Quality Assurance Report must measure Contractor's overall quality performance levels and identify any reoccurring quality concerns. Contractor must submit its first Monthly Quality

5) **Quality Issue Tracking.** Contractor must document and track any quality issues that arise throughout the course of the Contract in the Quality Assurance Report. Contractor's Project Manager must ensure that Contractor promptly resolves all quality control incidents. Contractor must also implement quality assurance procedures as needed to prevent reoccurring issues.

6) **Training for Reoccurring Quality Concerns.** Once Contractor and/or the State has identified a reoccurring quality concern that indicates a training need, Contractor must provide the necessary training to its personnel or subcontractors as soon as reasonably possible. Results from Contractor's quality reports must be used to augment staff training for Contractor's personnel.

7. SPECIFIC AGENCY STANDARDS

7.01 **IT Security Requirements.** Contractor must comply with all State Information Technology Security Policies, including but not limited to those listed within the existing Contract, herein, and on the DTMB "IT Policies, Standards, and Procedures (PSP)" webpage, currently found at http://michigan.gov/dtmb/0,4568,7-150-56355_56579_56755---,00.html.

7.02 If Contractor is unable to access or view any of the IT Security Requirements listed on any State website, Contractor must promptly notify the DTMB Program Manager, who will facilitate communications with the State Office of Cybersecurity & Infrastructure Protection. Contractor must ensure it is compliance with all State and federal policies and standards that may have security requirements or security impact on the project.

7.03 Contractors must lead all efforts to identify all State and federal policies and standards that may have security requirements or security impact on the Project.

7.04 In the event Contractor identifies a State and federal policy and/or standard that may have security requirements or security impact on this Contract's Project, Contractor must immediately notify the State.

8. PAYMENT SCHEDULE AND PRICING

8.01 Payment will be made on a time and materials basis (hourly based) in accordance with the existing Contract.

8.02 Payment will be considered timely if made by the State within forty-five (45) days after receipt of properly completed invoices.

8.03 The total purchase price for Professional Services (estimated time and materials fees) for this SOW is **$74,625.00.** This total figure is made up of the following items:

1) $10,875.00 for system implementation and Support. This includes a total of 40 hours of Tasks during Business Hours and 12 hours of Tasks outside of Business Hours as follows:

    a) $4,500 for 24 hours of Tasks billed at $187.50 per hour to resolve performance issue, re-Installing and testing.

    b) $3,000 for 16 hours of Tasks billed at $187.50 per hour for go-live assistance on the production server, post go-live support, and synchronizing the HDR Box during Standard Business Hours.

    c) $3,375 for 12 hours of tasks billed at $281.25 per hour for go-live assistance on the production server, post go-live support, and synchronizing the HDR Box outside of Standard Business Hours.

2) $7,500.00 for Charge on Administration-specific training, consultation and project management to implement of the Charge on Administration functionality contained in the Medication Management Suite software. This includes 40 hours of Tasks billed at $187.50 per hour.

3) $56,250.00 for 300 hours of Tasks for WORx PO implementation and Support billed at $187.50 per hour.

8.04 The above-named figures are summarized in the following table with reference to their corresponding sections in this SOW. The following table serves as a summary of payment terms by Project, but is by no means an exhaustive list of the Parties' respective obligations specified under the Contract and within this SOW.

SOW Section and Project	Description	Price
Section 3: Loading the Production Database Server and Resolving Performance Issues	Loading the Production Database Server and Resolving Performance Issues	$10,875.00
Section 4: Charge on Administration (COA) Functionality in the Medication Management Suite	40 hrs. @ $187.50/hr. for a Technical Consultant to perform WORx training, consultation, and project management to implement of the Charge on Administration functionality contained in the Medication Management Suite software	$7,500.00
Section 5: WORx PO Implementation, Configuration, and Support	300 hrs. @ $187.50/hr. for a Technical Consultant to perform WORx PO implementation and Support	$ 56,250.00
	Professional services total to be paid:	**$74,625.00**

8.05 All total charges are estimated. The State is under no obligation to utilize all estimated hours.

8.06 The State is under no obligation to utilize all of the hours estimated for onsite and remote work within this SOW and the existing Contract. This SOW does not constitute any commitment from the State to utilize additional Contractor services.

8.07 Any and all additional work effort or services funds not included in this Work Request must be pre-approved by the State DTMB Program Manager and follow the State's established Project Change Request approval processes.

9. TECHNICAL ASSUMPTIONS

9.01 A product catalog from ABC can be successfully loaded and updated from all 5 State-owned Hospital sites:

1) All FTP software required is loaded by the State on the client workstations.

2) All contracts/permissions necessary to access catalog data are in place with ABC.

3) These preparatory tasks must be completed by the State with minimal assistance from Mediware (less than 2 hours of consulting time).

9.02 The State has loaded WORx client software on the appropriate workstations.

9.03 The State has granted access/permissions to end users.

9.04 The Parties must not utilize electronic transactions for Orders and Acknowledgements in the form of EDI 850 and 855 transactions. The Parties must place orders directly with ABC outside of WORx.

9.05 The State is responsible for the use of barcode technology.

9.06 Contractor will successfully establish a pilot using a sample group of 15 to 20 products (including the most frequently used products and narcotics) with various units of measure (including tablet, liquid, ointment/cream, etc.) at each site.

9.07 All configurations and inventory item set up/file building will occur in the Test environment and again in Production. Contractor will not load, transfer or convert any State-owned data from the Test to Production Environments.

9.08 DTMB Project Manager will identify and will make available DTMB personnel required for this Project based on the agreed-upon Project schedule. Any significant delays caused by DTMB personnel not being available or Project prerequisites not being met may result in schedule delays, which can impact the Project sufficiently to require a chargeable Project change request addressing additional or extended Contractor personnel requirements and additional costs. Change requests will be managed and governed through the established change request process.

9.09 All efforts are estimated and may be more or less depending on circumstances. If the State requires that Contractor perform tasks in excess of the estimated efforts, Contractor will invoice utilizing the time and materials rates for resources stated herein. Milestone hours that exceed the agreed upon hours will be managed through the established change control process.

9.10 All additional work effort and deliverables, not included in this SOW, will follow an established Project Change Request approval process.

10. NOTICE AND PROJECT CONTACTS

10.01 The DHHS Program Manager is:

Cynthia Kelly, Bureau Director
Michigan Department of Health and Human Services
Capital Commons Center
316 S. Walnut St.
Lansing, MI 48909
(517) 335-0263
kellyc@michigan.gov

10.02 The DTMB Program Manager is:

Kimberly Woods, Business Relationship Manager
Michigan Department of Technology, Management and Budget
Agency Services Supporting Michigan Department of Health and Human Services
Chandler Building
300 E. Michigan Ave., Ste. 2
Lansing, MI 48933
(517) 284-7156
KoppschwoodsK@michigan.gov

10.03 The DTMB Contract Buyer and Contract Administrator is:

Simon Baldwin, Procurement Buyer

Michigan Department of Technology, Management and Budget
Office of Procurement IT Services Division
525 W. Allegan, Ste. 1
Lansing, MI 48933
(517) 284-6997
BaldwinS@michigan.gov

10.04 The Mediware Project Manager is:

Larry Hughes

Mediware Information Systems, Inc.

11711 West 79th Street

Lenexa, KS 66214

(913) 307-1075

Larry.Hughes@mediware.com

11. HOURS AND LOCATION OF WHERE THE WORK IS TO BE PERFORMED

11.01 The work is to be performed, completed, and managed remotely unless otherwise determined by the Contractor and approved by the DTMB Program Manager.

11.02 Contractor personnel must be available, on hand, and able to complete emergency tasks.

11.03 The State is not obligated to provide State management of assigned work outside of normal State working hours. The State reserves the right to modify the work hours in the best interest of the project. Contractor(s) must observe the same standard holidays as State employees. The State does not compensate for holiday pay. Contractor(s) will not be reimbursed for travel expenses or travel time. No overtime will be permitted.

12. INTELLECTUAL PROPERTY AND RIGHT TO OWNERSHIP

12.01 Pursuant to Section 2.260 of the Contract, Contractor grants the State a non-exclusive, nontransferable license to use the WORx Medication Management Suite system and any other licensed deliverables during the term of the Contract.

12.02 The State acknowledges and agrees that: (i) Contractor or its licensor retains all right, title, and interest in the Licensed Software, the Deliverables, the Work Product, and all documentation related thereto, and all intellectual property rights therein, and (ii) Contractor is not the State's employee, and none of the foregoing materials are works made for hire. Contractor retains the exclusive right to reproduce, publish, sell, and license the Licensed Software, Deliverables, and all documentation and work product resulting from the performance of the Services. At no time during the term of the Contract or any time thereafter shall the State challenge the validity of Contractor's copyright in of ownership of Licensed Software, Deliverables, and all documentation and work product resulting from the performance of the Services.

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

12.04 The State is the owner of all State-specific data under the Contract. The State may use the data provided by the Contractor for any purpose. The State will not possess or assert any lien

or other right against the Contractor's data. Without limiting the generality of this Section, the State may use personally identifiable information only as strictly necessary to utilize the Services and must disclose the information only to its employees who have a strict need to know the information, except as provided by law. The State must comply at all times with all laws and regulations applicable to the personally identifiable information. Other material developed and provided to the State remains the State's sole and exclusive property.

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

13. GENERAL PROVISIONS

13.01 **Good Faith.** Pursuant to existing Contract Section 2.028, each party must act reasonably and in good faith in performing duties and obligations under the Contract.

13.02 **Satisfaction.** Contractor must not consider any aspect of this Project to be complete until Contractor has received a written confirmation of satisfactory work from the DTMB Program Manager.

13.03 **No Commitment for Additional Services.** This SOW does not constitute a commitment by the State to utilize any additional services. Utilization of additional services funds requires pre-approval of the DTMB Program Manager and must follow and established Project Change Request approval process. Hours listed above for onsite and remote by resources may be adjusted by written approval of the State DTMB Program Manager.

13.04 **Compliance with State and Federal Law, Administrative Regulations, Guidelines, and Recommendations.** In performing its obligations under this Contract, each party agrees to comply with all applicable Federal and State laws and administrative regulations, guidelines, and recommended policies. These include, but are not limited to, items released from the Centers for Medicare and Medicaid Services (CMS), Internal Revenue Service (IRS), the National Institute of Standards and Technology (NIST), U.S. Office of Management and Budget (OMB), National Institutes of Health (NIH), and the Office for Civil Rights ("OCR").

13.05 **Web or Hyperlinks.** In the event Organization is unable to access or view any of the web links (also known as hyperlinks) contained within this Agreement, Organization must promptly notify the DTMB Program Manager. An inaccessible or non-working web link will not excuse the Organization of its duties and obligations under this Agreement. Organization is responsible

for ensuring its personnel and/or subcontractors have reviewed all State and DTMB policies under this Agreement.

13.06 **Entire Agreement.** This SOW, together with the existing Contract, constitutes the Parties' complete and exclusive statement regarding work requirements and procedures. Apart from the amendments made in this SOW, all Contract terms and conditions must remain in full force and effect.

IN WITNESS WHEREOF, the Parties, intending to be legally bound, have caused their duly authorized officers to execute this SOW via a contract change notice signature page, which is incorporated herein by reference.

Form No. DTMB-3521 (Rev. 4/2012)
AUTHORITY: Act 431 of 1984
COMPLETION: Required
PENALTY: Contract change will not be executed unless form is filed

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

CHANGE NOTICE NO. 3

to

CONTRACT NO. 071B0200070

between

THE STATE OF MICHIGAN

and

NAME & ADDRESS OF CONTRACTOR:	PRIMARY CONTACT	EMAIL
Mediware Information Systems, Inc.	Carolyn Barrett	Carolyn.barrett@mediware.com
11711 West 79th Street	TELEPHONE	CONTRACTOR #, MAIL CODE
Lenexa, KS 66214	(913) 307-1000	

STATE CONTACTS	AGENCY	NAME	PHONE	EMAIL
CONTRACT COMPLIANCE INSPECTOR	DTMB	Jeffrey Haskell	517-335-5040	haskellj@michigan.gov
BUYER	DTMB	Barb Suska	517-284-7026	Suskab2@michigan.gov

CONTRACT SUMMARY:

DESCRIPTION: **Pharmacy Management System – DIT/DCH**

INITIAL EFFECTIVE DATE	INITIAL EXPIRATION DATE	INITIAL AVAILABLE OPTIONS	EXPIRATION DATE BEFORE CHANGE(S) NOTED BELOW
December 7, 2009	December 6, 2014		December 6, 2014
PAYMENT TERMS	**F.O.B**	**SHIPPED**	**SHIPPED FROM**
N/A	N/A	N/A	N/A

ALTERNATE PAYMENT OPTIONS:			AVAILABLE TO MiDEAL PARTICIPANTS	
☐ P-card	☐ Direct Voucher (DV)	☐ Other	☐ Yes	☒ No

MINIMUM DELIVERY REQUIREMENTS:

N/A

DESCRIPTION OF CHANGE NOTICE:

EXTEND CONTRACT EXPIRATION DATE	EXERCISE CONTRACT OPTION YEAR(S)	EXTENSION BEYOND CONTRACT OPTION YEARS	LENGTH OF OPTION/EXTENSION	EXPIRATION DATE AFTER CHANGE
☐ No ☒ Yes	☒	☐	Two Years	Dec. 6, 2016

VALUE/COST OF CHANGE NOTICE:	ESTIMATED REVISED AGGREGATE CONTRACT VALUE:
$383,385.00	$3,722,871.00

Effective November 25, 2014, this contract exercises the first, two (2) year option, adds Avatar (ADT & Billing) and is increased by $383,385.00 for ongoing maintenance and support per the attached revised pricing schedule (Appendix E) for years 5 and 6. New contract end date is December 6, 2016. New estimated revised aggregate contract value is $3,722,871.00. Please note buyer has been changed to Barb Suska and the contract compliance inspector has been changed to Jeffrey Haskell (see above for contact info). All other terms, conditions, pricing and specifications remain the same. Per contractor and agency agreement, DTMB

Procurement approval and the approval of the State Administrative Board on November 25, 2014.

Mediware®

Item	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
WORx/WORx PO	$23,136	$24,293	$25,507	$6,971	$26,783	$28,122
MediMAR	$25,305	$26,570	$27,899	$7,624	$29,294	$30,758
MediCOE	$21,690	$22,775	$23,913	$6,535	$25,109	$26,364
MediREC	$2,169	$2,277	$2,391	$654	$2,511	$2,636
Mediware Licensed Software Subtotal	**$72,300**	**$75,915**	**$79,711**	**$21,784**	**$83,696**	**$87,881**
Informix	$32,136	$33,743	$35,430	$9,683	$37,201	$39,062
SQR	$1,116	$1,172	$1,230	$336	$1,292	$1,357
Infomaker	$1,440	$1,512	$1,588	$434	$1,667	$1,750
FDB	$38,754	$40,692	$42,726	$11,677	$44,863	$47,106
Enexity	$563	$591	$621	$170	$652	$684
Sublicensed Software Subtotal	**$74,009**	**$77,709**	**$81,595**	**$22,299**	**$85,675**	**$89,958**
Subtotal (Items in Contract)	**$146,309**	**$153,624**	**$161,306**	**$44,083**	**$169,371**	**$177,840**
Additional Informix	**$6,240**	**$6,552**	**$6,880**	$1,880	$7,224	$7,585
Additional WORx Workstation Licenses	**$5,738**	**$6,025**	**$6,326**	$1,729	$6,642	$6,975
EMBRS/ADT Interface					$1,890	$1,985
EMBRS/Billing Interface					$1,890	$1,985
Grand Total	**$158,287**	**$166,201**	**$174,511**	**$47,692**	**$187,017**	**$196,368**
Contract Period	**9/1/11 to 8/31/12**	**9/1/12 to 8/31/13**	**9/1/13 to 8/31/14**	**9/1/14 to 12/6/14**	**12/7/2014 to 12/6/2015**	**12/7/2015 to 12/6/2016**

Form No. DMB 234 (Rev. 1/96)
AUTHORITY: Act 431 of 1984
COMPLETION: Required
PENALTY: Contract will not be executed unless form is filed

STATE OF MICHIGAN
DEPARTMENT OF TECHNOLOGY MANAGEMENT AND BUDGET **December 1, 2011**
PROCUREMENT
P.O. BOX 30026, LANSING, MI 48909
OR
530 W. ALLEGAN, LANSING, MI 48933

CHANGE NOTICE NO.2
TO
CONTRACT NO. 071B0200070
between
THE STATE OF MICHIGAN
and

NAME & ADDRESS OF CONTRACTOR **Mediware Information Systems, Inc.** **11711 West 79th Street** **Lenexa, KS 66214** **Email: Carolyn.barrett@mediware.com**	TELEPHONE Carolyn Barrett (913) 307-1000 CONTRACTOR NUMBER/MAIL CODE BUYER/CA (517) 241-1640 **Mark Lawrence**
Contract Compliance Inspector: Sara Williams **Pharmacy Management System – DIT/DCH**	
CONTRACT PERIOD: From: **12/7/09** To: **12/6/2014 (five years)**	
TERMS **N/A**	SHIPMENT **N/A**
F.O.B. **N/A**	SHIPPED FROM **N/A**
MINIMUM DELIVERY REQUIREMENTS **N/A**	
MISCELLANEOUS INFORMATION:	

NATURE OF CHANGE(S):

Effective immediately, the Revised Table 2 for Appendix E Cost Table is hereby incorporated into this contract.

AUTHORITY/REASON(S):

Per contractor request and agency concurrence and the approval of DTMB Procurement.

TOTAL ESTIMATED CONTRACT VALUE: $3,339,486.00

Table 2: Recurring Cost: Updates, Maintenance and Support

No.	Cost Categories	Cost ($)	Comments
B.	Maintenance and support cost (includes scope as outlined in Contractor's Annual Support SOW)		*Assumes a 5% increase per year. Does not include sublicensed software licensing level changes, if any, or services outside the scope of Contractor's standard maintenance and support services.
	9/1/11-8/31/12	$158,287	
	9/1/12-8/31/13	$166,201	
	9/1/13-8/31/14	$174,511	
	9/1/14-12/6/14	$47,692	
	Total Recurring Cost	$546,692	
Option 1 Extension			
	12/7/14-12/6/15	$183,236	
	12/7/15-12/6/16	$192,398	
Option 2 Extension			
	12/7/16-12/6/17	$202,018	
	12/7/17-12/6/18	$212,119	

Form No. DMB 234 (Rev. 1/96)
AUTHORITY: Act 431 of 1984
COMPLETION: Required
PENALTY: Contract will not be executed unless form is filed

STATE OF MICHIGAN
DEPARTMENT OF TECHNOLOGY MANAGEMENT AND BUDGET **May 11, 2011**
PURCHASING OPERATIONS
P.O. BOX 30026, LANSING, MI 48909
OR
530 W. ALLEGAN, LANSING, MI 48933

CHANGE NOTICE NO.1
TO
CONTRACT NO. 071B0200070
between
THE STATE OF MICHIGAN
and

NAME & ADDRESS OF CONTRACTOR **Mediware Information Systems, Inc.** **11711 West 79th Street** **Lenexa, KS 66214** **Email: Carolyn.barrett@mediware.com**	TELEPHONE Carolyn Barrett (913) 307-1000 CONTRACTOR NUMBER/MAIL CODE BUYER/CA (517) 241-1640 **Mark Lawrence**
Contract Compliance Inspector: Sara Williams **Pharmacy Management System – DIT/DCH**	
CONTRACT PERIOD: From: **12/7/09** To: **12/6/2014 (five years)**	
TERMS **N/A**	SHIPMENT **N/A**
F.O.B. **N/A**	SHIPPED FROM **N/A**
MINIMUM DELIVERY REQUIREMENTS **N/A**	
MISCELLANEOUS INFORMATION:	

NATURE OF CHANGE(S):

Effective immediately, this contract is hereby INCREASED by $9,799.00 for two additional WORx Workstation software licenses and one year of support. Pricing is attached. Please note that the buyer has been changed to Mark Lawrence. All other terms and conditions remain the same.

AUTHORITY/REASON(S):

Per contractor request and agency concurrence.

INCREASE: $9,799.00

TOTAL REVISED ESTIMATED CONTRACT VALUE: $3,339,486.00

STATEMENT OF WORK NUMBER 1

I. SOFTWARE

A. Licensed Software:

2 – WORx Workstation Licenses

Subject to Customer's compliance with the terms and conditions of the Agreement and this SOW(s), Mediware shall grant to Customer, and Customer shall accept, a limited, perpetual, personal, non-exclusive, non-transferable, non-assignable, non-sublicensable license under Mediware's Intellectual Property Rights to use the Interface identified herein at the Customer Site(s). The Interface may only be used with the Licensed Software licensed pursuant to the terms of a Statement of Work at the Sites identified therein. MEDIWARE DISCLAIMS ALL IMPLIED WARRANTIES RELATING TO THE LICENSED SOFTWARE INCLUDING WARRANTIES OF MERCHANTABILITY, NONINFRINGMENT AND FITNESS FOR A PARTICULAR PURPOSE.

II. FEES AND PAYMENT TERMS:

LICENSED SOFTWARE	
Description	**Price**
2 – WORx Workstation Licenses @ $15,939 each	$ 31,878
Allowance on each License – 2 @ -($13,908) each	-($ 27,817)
Licensed Software Total:	**$ 4,061**

ANNUAL SUPPORT FEES	
Description	**Initial Annual Fee**
2 - Workstation Licensed @ $2,869 each	$ 5,738
Initial Annual Fee:	**$ 5,738**

Note: Annual support fees are in addition to all other support fees and shall be subject to annual increases.

PAYMENT TERMS:

100% of License Fees due upon Execution of this Statement of Work: $ 4,061.00

Initial Annual Support Fees for the Licensed Software shall be due and payable upon first productive use and invoiced monthly in advance.

Form No. DMB 234 (Rev. 1/96)
AUTHORITY: Act 431 of 1984
COMPLETION: Required
PENALTY: Contract will not be executed unless form is filed

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

December 8, 2009

NOTICE
OF
CONTRACT NO. 071B0200070
between
THE STATE OF MICHIGAN
and

NAME & ADDRESS OF CONTRACTOR **Mediware Information Systems, Inc.** **11711 West 79th Street** **Lenexa, KS 66214** **Email: Carolyn.barrett@mediware.com**	TELEPHONE Carolyn Barrett (913) 307-1000 CONTRACTOR NUMBER/MAIL CODE BUYER/CA (517) 241-0239 **Jacque Kuch**
Contract Compliance Inspector: Sara Williams **Pharmacy Management System – DIT/DCH**	
CONTRACT PERIOD: From: **12/7/09** To: **12/6/2014 (five years)**	
TERMS **N/A**	SHIPMENT **N/A**
F.O.B. **N/A**	SHIPPED FROM **N/A**
MINIMUM DELIVERY REQUIREMENTS **N/A**	
MISCELLANEOUS INFORMATION:	

Estimated Contract Value: $3,329,687.00

Form No. DMB 234 (Rev. 1/96)
AUTHORITY: Act 431 of 1984
COMPLETION: Required
PENALTY: Contract will not be executed unless form is filed

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

CONTRACT NO. 071B0200070

between
THE STATE OF MICHIGAN
and

NAME & ADDRESS OF CONTRACTOR **Mediware Information Systems, Inc.** **11711 West 79th Street** **Lenexa, KS 66214** **Email: Carolyn.barrett@mediware.com**	TELEPHONE Carolyn Barrett (913) 307-1000 CONTRACTOR NUMBER/MAIL CODE BUYER/CA (517) 241-0239 **Jacque Kuch**
Contract Compliance Inspector: Sara Williams **Pharmacy Management System – DIT/DCH**	
CONTRACT PERIOD: From: **12/7/09** To: **12/6/2014 (five years)**	
TERMS **N/A**	SHIPMENT **N/A**
F.O.B. **N/A**	SHIPPED FROM **N/A**
MINIMUM DELIVERY REQUIREMENTS **N/A**	
MISCELLANEOUS INFORMATION: **The terms and conditions of this Contract are those of ITB #071I9200167, this Contract Agreement and the vendor's quote. In the event of any conflicts between the specifications, and terms and conditions, indicated by the State and those indicated by the vendor, those of the State take precedence.** **Estimated Contract Value: $3,329,687.00**	

THIS IS NOT AN ORDER: This Contract Agreement is awarded on the basis of our inquiry bearing the ITB No. 071I9200167. Orders for delivery will be issued directly by the Department of Information Technology through the issuance of a Purchase Order Form.

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

FOR THE CONTRACTOR:	**FOR THE STATE:**
Mediware Information Systems, Inc. Firm Name	Signature
Authorized Agent Signature	Greg Faremouth, Director Name/Title
Authorized Agent (Print or Type)	IT Division Division
Date	Date

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This Contract is comprised of the following:

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Appendix A Functional Specifications
Appendix B Technical Specifications
Appendix C-1 EA Assessment
Appendix C-2 IT Environment/Designated Platform
Appendix C-3 Interface File layouts
Appendix D Preliminary Project Plan
Appendix E Pricing and Identification of Licensed Software and Included Customizations and Payment Terms

DEFINITIONS

24x7x365	Means 24 hours a day, seven days a week, and 365 days a year (including the 366th day in a leap year).
Acceptance Module	Has the meaning given in Section 1.502.
Additional Service	Means any Services/Deliverables within the scope of the Contract, but not specifically provided under any Statement of Work, that once added will result in the need to provide the Contractor with additional consideration.
Audit Period	See Section 2.110
Blanket Purchase Order	An alternate term for Contract as used in the States computer system.
Business Critical	Any function identified in any Statement of Work as Business Critical.
Business Day	Whether capitalized or not, shall mean any day other than a Saturday, Sunday or State-recognized legal holiday (as identified in the Collective Bargaining Agreement for State employees) from 8:00am EST through 5:00pm EST unless otherwise stated.
Core Functionality	Means WORx v3.6 with interfaces (without customizations) and a 1 unit, 1 facility pilot of MediMAR, MediREC, and MediCOE (without customization).
Chronic Failure	Defined in any applicable Service Level Agreements.
COTS Package	Means the Contractor proprietary software included as part of the Licensed Software.
COTS Sublicensed Software	Means the third party software identified in Appendix E to be sublicensed by Contractor to Customer under this Agreement.
Customization of COTS Package and Interfaces	Means the changes to the COTS Package to meet the RFP requirements.
Days	Means calendar days unless otherwise specified.
Deleted – Not Applicable	Section is not applicable or included in this RFP. This is used as a placeholder to maintain consistent numbering.
Deliverable	Physical goods and/or commodities as required or identified by a Statement of Work.
DMB	Michigan Department of Management and Budget
Documentation	Contractor's WORx, MediMAR/MediCOE/MediREC Documentation, as applicable; documentation of customizations required hereunder and interface documentation.
Environmentally preferable products	A product or service that has a lesser or reduced effect on human health and the environment when compared with competing products or services that serve the same purpose. Such products or services may include, but are not limited to, those that contain recycled content, minimize waste, conserve energy or water, and reduce the amount of toxics either disposed of or consumed.
First Productive Use	Means the day Customer begins using any part of the Licensed Software in a live production environment for the purpose of processing actual patient information.
FTE	Full Time Equivalence
Gross Negligence	Means willful or wanton and reckless disregard for the consequences to the safety or property of another when there is a manifest duty with respect to the same.

	Gross Negligence shall not be construed to include a claim based on the design or performance of the Licensed Software.
Incident	Any interruption in Services.
ITB	A generic term used to describe an Invitation to Bid. The ITB serves as the document for transmitting the RFP to potential bidders
Key Personnel	Any Personnel designated in Article 1 as Key Personnel.
Licensed Software	Means the object code version of computer programs developed by Contractor listed in Appendix E as to be licensed but excluding all third-party software.
MDCH	Michigan Department of Community Health
MDIT	Michigan Department of Information Technology
MediCOE Software	Means the currently available version of the MediCOE clinical software.
MediMAR Software	Means the currently available version of the MediMAR clinical software.
MediREC Software	Means the currently available version of the MediREC clinical software.
Modules	Means each of the following Modules: WORx (with interfaces), MediMAR, MediCOE, MediREC, the required customizations and the optional customizations.
New Work	Any Services/Deliverables outside the scope of the Contract and not specifically provided under any Statement of Work, that once added will result in the need to provide the Contractor with additional consideration.
Professional	Means socially acceptable business conduct, such as reasonable dress, no use of foul language, and a polite manner. In this context professional does not mean belonging to a profession.
Program Error	
Recycling	The series of activities by which materials that are no longer useful to the generator are collected, sorted, processed, and converted into raw materials and used in the production of new products. This definition excludes the use of these materials as a fuel substitute or for energy production.
Reuse	Using a product or component of municipal solid waste in its original form more than once.
RFP	Request for Proposal designed to solicit proposals for services
Services	Any function performed for the benefit of the State by Contractor or its designees other than the State or its designees. Services include implementation and training services as well as services required to implement customizations (required and optional) and any required non-standard interfaces, each as required under Appendix E, the Project Plan and/or a Statement of Work.
Site	Means a hospital location licensed to use the COTS Package under this Agreement (there are five licensed Sites under this Agreement).
SOM	State of Michigan
Source reduction	Any practice that reduces the amount of any hazardous substance, pollutant, or contaminant entering any waste stream or otherwise released into the environment prior to recycling, energy recovery, treatment, or disposal.
State Location	Any physical location where the State performs work. State Location may include state-owned, leased, or rented space.
Subcontractor	A company Contractor delegates performance of a portion of the Services to, but does not include independent contractors engaged by Contractor solely in a staff augmentation role.

Super User	State system administrator(s), project manager(s) and key clinical or other users expected to have detailed knowledge of the system.
Train the Trainer	Contractor training of State's system administrators, nursing staff trainers, doctor trainers, and pharmacist trainers.
Unauthorized Removal	Contractor's removal of Key Personnel without the prior written consent of the State.
Update	Means any interim release of the Licensed Software incorporating error corrections, bug fixes, and/or new features which are officially released by Contractor to its customers of the Licensed Software who are purchasing maintenance agreement. Updates do not include modules, scripts or software that Contractor prices or markets separately.
Warranty Period	Means the date that commenced upon delivery and continues for 90 days following Final Acceptance.
Waste prevention	Source reduction and reuse, but not recycling.
Waste reduction and Pollution prevention	The practice of minimizing the generation of waste at the source and, when wastes cannot be prevented, utilizing environmentally sound on-site or off-site reuse and recycling. The term includes equipment or technology modifications, process or procedure modifications, product reformulation or redesign, and raw material substitutions. Waste treatment, control, management, and disposal are not considered pollution prevention, per the definitions under Part 143, Waste Minimization, of the Natural Resources and Environmental Protection Act (NREPA), 1994 PA 451, as amended.
Work in Progress	A Deliverable that has been partially prepared, but has not been presented to the State for Approval.
Work Product	Refers to any data compilations, reports, and other media, materials, or other objects or works of authorship created or produced by the Contractor as a result of an in furtherance of performing the services required by this Contract.
WORx Software	Means the WORx clinical software version 3.6.

ARTICLE 1 – STATEMENT OF WORK (SOW)

1.000 Project Identification

1.001 Project Request

The State of Michigan through the Michigan Department of Management & Budget (MDMB), the Michigan Department of Community Health (MDCH), and the Michigan Department of Information Technology (MDIT) has issued this contract for a Commercial Off-the-Shelf (COTS) Pharmacy Management System software and recommended hardware solution. The solution should employ contemporary technology that would enable interface with other systems and modules as described herein, including electronic medical records and current facilities patient demographic database and billing systems as specified herein. This solution will replace an obsolete pharmacy system currently in use at five (5) Joint Commission accredited psychiatric hospitals and one (1) Intermediate Care Facility for Mentally Retarded (ICF/MR) Center for the developmentally disabled (this facility is scheduled for closure by 10/10/09). Each location will operate as a separate pharmacy utilizing one common database and be interfaced with existing billing and patient demographic systems as set forth otherwise herein.

This project includes validation and mapping of business requirements, configuration and implementation of the COTS software, Interfaces, data conversion and migration, training, and maintenance and support, each as required under this Agreement. Services for future enhancements are also included. **The Contractor's standard WORx solution version 3.6 with interfaces (without customization, optimization) must be implemented and operational at 5 facilities listed herein on or before June 1, 2010.** The Parties will cooperate to develop and implement work arounds between June 1, 2010 and implementation of the required customization of COTS (as such customizations are identified in **Appendix E**) with respect to any functionality only available after implementation of the required customization of COTS (as such customizations are identified in **Appendix E**) that is used on a daily basis and that the absence of which has a significant adverse effect on the hospital/facility.

In addition, the following will also be installed by June 1, 2010: IP OLA (with standard NCDP interface), WORx PO (with standard EDI files), MediMAR, MediREC, MediCOE at 1 unit / 1 facility as part of a pilot and will be available to continue rollout at remaining units / facilities in customer defined rollout timeframe.

The Project Plan will identify implementation dates for MediMAR, MediCOE and MediREC roll-out. MediCOE, MediMAR and MediREC will be installed at all five (5) sites on or before June 30, 2010.

There will be a separate Project Plan for development and implementation of customizations of COTS (as required under **Appendix E**) and any optional customizations (as required under **Appendix E**). The required customizations will be available for installation on or before June 30, 2010. The optional customizations required hereunder shall be available for installation on or before September 15, 2010.

1.002 Background

The MDCH currently operates an existing pharmacy management system, Cerner MSMEDS System, at the following five (5) state-operated facilities:

Caro Center, 2000 Chambers Road, Caro 48723
Center for Forensic Psychiatry, 8303 Platt Road, Saline 48176
Hawthorn Center, 18471 Haggerty Road, Northville 48168
Kalamazoo Psychiatric Hospital, 1312 Oakland Drive, Kalamazoo 49008
Walter Reuther Psychiatric Hospital, 30901 Palmer Road, Westland 48186

Each facility has their own instance of the MSMEDS database, as well as their own formularies (a/k/a drug file). The system is obsolete and will no longer be supported by the vendor. The existing system has numerous drawbacks and limitations, including the inability to track inventory, inflexible reporting and data-retrieval capability, inability to handle Medicare Part D, etc.

There are approximately 1,000 total beds in all 5 facilities. For FY08 there were approximately 1,388 admissions and 541 re-admissions to the facilities with an average number of medications orders per patient of 10 and cart fill cycle of 15 days. Patient length of stay ranges from days to years.

Each facility operates one pharmacy on its site and pharmacy department workstations in each site range from 2 to 9 workstations. Total number of workstations within the 5 worksites is 33 with a total of 41 pharmacy users. Throughout the system there are 52 nursing stations with a total number of nurses within the 5 sites currently is 457. There are also 96 prescribers within the 5 sites.

The goal of the MDCH is to implement a pharmacy management system in the five locations that would provide significantly enhanced patient safety features consistent with the Joint Commission accreditation standards and current pharmacy industry best practices. The replacement system should also provide better integration and interface with existing systems and future electronic medical records and meet the following objectives:

1. Medication Reconciliation of patients current medication
2. Electronic Physician Order Entry
3. Pharmacy management including inventory, dispensing, formulary management, patient safety edits, dose tracking and histories, etc.
4. Bedside Administration including automated checks and documentation
5. Ability to transfer/access records between locations and from multiple locations.
6. Provide interfaces to current INFOSYS billing and patient demographic systems
7. Ability to interface with future electronic medical records MDCH currently does not have an EMR in place and billing systems.
8. Allow for flexible data analysis

1.100 Scope of Work and Deliverables

1.101 In Scope

A more detailed description of the software (deliverables) and services (implementation, customizations, maintenance and training) is provided in Article 1, Section 1.104, Work and Deliverables.

The Contractor shall provide the following services and deliverables as described herein and in the Project Plan:

- Project planning.
- Phased in Implementation with full implementation of WORx version (with interfaces) 3.6 and a pilot for MediCOE, MediMAR, and MediREC no later than June 1, 2010.
- Configuration Guidance to the State with respect to the State's validation, mapping, and documentation of business requirements; however, the business requirements have generally been mapped as reflected in **Appendix A** and **Appendix B**.
- Active patients upload (5 instances of Cerner MSMEDS Pharmacy System) as more fully described herein. Active patient upload is possible provided the MDIT's existing data is put by MDIT into ASCII format and there are corresponding fields to WORx system.
- Contractor will load into the system active patient data (current and previous medication orders for active patients) as part of the table build process.
- Key data feeds include: NDC Codes and other (required in the Formulary build), Physician Master and OLA (insurance) information, and other mutually agreed upon data as required.
- Contractor will provide the State with an Excel extract of the Formulary for use in the building process.
- Interface files per requirements herein.
- Phased in Testing per the requirements herein.
- Documented Training using 'Train the Trainer' philosophy for facility staff in accordance with Contractor standard training materials, including materials that will address customizations to the product.

- Maintenance and Support Services for Licensed Software as more fully described herein.
- Full transition support, training using "Train the Trainer", and knowledge transfer to State of Michigan MDIT super-user as described in the Project Plan and herein.
- Reserve Bank of hours for: future enhancements; onsite, as mutually agreed, post-implementation help to resolve workflow and application issues; and System Enhancement Activities / Scope Modifications; non-standard reports; and implementation of future customizations.
- Hardware, as mutually agreed.

1.102 Out Of Scope

The following are out of the scope of this Request for Proposal:

- Hospital wide solutions without an entirely independent Pharmacy module
- Hardware Maintenance and Hosting are out of scope.
- Application design and development not related to the services described in this RFP.
- Hardware / software not compatible with current State standards

1.103 Environment

The links below provide information on the State's Enterprise IT policies, standards and procedures which includes security policy and procedures, IT strategic plan, eMichigan web development and the State Unified Information Technology Environment (SUITE). The Contractor will conform to State IT policies and standards, including all posted templates as of the execution of this Contract. Any changes to the same shall be considered a change. The parties agree that the objective is that all services and products provided as a result of this contract comply with all applicable SOM IT policies and standards in effect at the time this contract is issued or exceptions are obtained. In the event there is any disagreement regarding such compliance objective, such issues will be resolved by mutual agreement.

The Contractor must request any exceptions to State IT policies and standards in accordance with MDIT processes; provided that the State has applied for exceptions noted in Appendix C-2 and understands that approval is necessary for successful implementation. It will be the responsibility of the State to deny the exception request or seek a policy or standards exception. The Contractor is required to review with the objective that it comply with all applicable links provided below to the extent applicable to the services Contractor performs hereunder; provided that to the extent any of the requirements below change after the execution of the Contract, such change will be handled under Section 1.101(h). In the event there is any disagreement regarding the compliance objective, such issues will be resolved by mutual agreement.

Enterprise IT Policies, Standards and Procedures: http://www.michigan.gov/dit/0,1607,7-139-34305---,00.html

Except as otherwise set forth in **Appendix C-2**, all software and hardware items provided by the Contractor must run on and be compatible with the MDIT Standard Information Technology Environment. In the event there is any disagreement regarding compatibility, such issues will be resolved by mutual agreement. Additionally, the State must be able to maintain software and other items produced as the result of the Contract through the purchase of maintenance services from Contractor and third party providers.

The Contractor may request, in writing, a change in the standard environment, providing justification for the requested change and all costs associated with any change. The State's Project Manager must approve any changes, in writing, and MDIT, before work may proceed based on the changed environment. No change to the standard requirement shall be required for the State to make available the IT environment/designated platform set forth in **Appendix C-2**.

Enterprise IT Security Policy and Procedures: http://www.michigan.gov/dit/0,1607,7-139-34305-108216--,00.html

The State's security environment includes:

- MDIT/MDCH Single Login (Currently known as, SSO).
- MDIT provided SQL security database.
- Secured Socket Layers.
- SecureID (State Security Standard for external network access and high risk Web systems)

Contractor will, utilizing a VPN and Secure ID (provided by the State) access the State's system as necessary to provide the services.

IT Strategic Plan: http://www.michigan.gov/dit/0,1607,7-139-30637-135173--,00.html
IT eMichigan Web Development Standard Tools:
http://www.michigan.gov/documents/Look_and_Feel_Standards_2006_v3_166408_7.pdf

The State Unified Information Technology Environment (SUITE):
Includes standards for project management, systems engineering, and associated forms and templates – must be followed in to the extent applicable to the services being performed:
http://www.michigan.gov/suite. The State agrees that the Contractor will follow its own standard with respect to the implementation, development and maintenance of the software required herein as such software is Contractor's proprietary software.

Agency Specific Technical Environment. Exceptions noted in EA Assessment in Appendix C-1 and exceptions noted in C-2 that have been approved to the exception process control with respect to the software licensed hereunder.

Hardware Listing	○ Multiple HP Proliant DL380 G3 with 2 (Intel Xeon 3.06 GHz)Dual-Core; 4 GB memory; 3 X 36 GB Hard drives; RAID 5; Load balanced via content switch; ○ Multiple HP Proliant DL560 G1 with 4 (Intel Xeon 2.0 GHz)Dual-Core; 4 GB memory; 3 X 36 GB Hard drives; RAID 5; Load balanced via content switch
Operating Systems	○ Windows 2003, Internet Information Services 6.0
Desktop Workstations	○ Dell Pentium with Windows XP
Software Listing	○ VB.Net 2.x and 3.0 framework ○ C#.Net 2.x and 3.0 framework ○ ASP.Net 2.x and 3.0 framework ○ HTML ○ JavaScript ○ XML ○ MS Office 2003 ○ Microsoft Project ○ Visio
Database	○ MS SQL Server 2005, Oracle 10g
Network	○ MS Active Directory
Browser	○ Internet Explorer 6.x, 7.x, Firefox
Reporting tools	○ SQL Reporting Services 2005
Interfaces	○ State of Michigan's eMichigan Standards
Other systems/applications requiring interface	○ INFOSYS / Demographic - the State's Information System (input to system) ○ INFOSYS / Billing - the State's Information System (output from system) ○ Michigan Automated Prescription Services System (MAPS) – output from system ○ Capability to interface electronically with AmerisourceBergen ○ System written to accept predefined CSV formulary file from Guaranteed Returns and write conversion program from that file

1.104 Work and Deliverables

This section includes **I. Services (work) To Be Provided and Deliverables** and **II. Requirements** (functional, technical, and service levels) for the successful completion of this project. The Core Functionality shall be operational no later than June 1, 2010.

Without limiting the State's obligations, the Contractor shall provide deliverables, services and staff, and otherwise do all things necessary to fulfill the Contractor's obligations under the Project Plan, in accordance with the requirements as set forth below.

Deliverables for purposes of acceptance testing shall consist of: (a) WORx version 3.6 (with interfaces required herein); (b) the MediMAR module; (c) the MediCOE module; (d) MediREC; (e) the customizations of COTS (as required under **Appendix E**); (f) the optional customizations (as required under **Appendix E**); (g) the Project Plan; and (h) the training materials.

I. Services (work) To Be Provided and Deliverables

A. Project Planning

Project Planning covers those activities that require ongoing administrative oversight throughout all the Pharmacy implementation processes, from initiation to completion of the project. Planning consists of a number of plans that will guide and govern the project from requirements gathering through deployment and also for preparing for the eventual assumption of responsibilities by the State. Project Planning consists of administrative activities required in Sections 1.3 and 1.4, and from below.

Deliverables:

1. **Detailed Project Plan** - Within 10 business days of the Contract Orientation meeting, the Contractor shall update the draft Project Plan from their proposal. See Section 1.301 Project Plan Management, for detailed requirements on the Project Plan. The detailed plan will:
   a. Be provided in Microsoft Project.
   b. Consist of a schedule and Gantt chart (for all project tasks, subtasks, and activities), milestones, and deliverables.
   c. Consist of Contractor and State resources for all tasks, subtasks, and activities that exist as line items within the Project Plan.
   d. Consist of the following date-related information:
      i. Originally scheduled start and end dates for all tasks, subtasks, and activities (including milestones and deliverables).
      ii. Anticipated start dates for future tasks, subtasks, and activities.
      iii. Anticipated end dates for all current and future tasks, subtasks, and activities.
   e. Detail the State's obligations.

2. **Quality Management Plan -** This deliverable describes the Contractor's approach for assuring the quality of work and deliverables completed during the Project. The plan will address the following:
   a. Quality Assurance Activities - Description of the quality assurance activities to be performed by the Contractor during the term of the contract.

3. **Test Plan** – The Project Plan will include a plan for testing the software Deliverables and Final Acceptance. The Project Plan shall contain:
   a. Description of testing approach.
   b. Definition of test cases or processes, in collaboration with the Bureau of Hospitals and Centers.
   c. Resources required from the State and Contractor.
   d. Schedule.
   e. State will validate test results.

Acceptance Criteria
Acceptance criteria for the Project Plan documents are that they must contain the items as outlined in the above listed plans. General Document Deliverables acceptance criteria are contained in Sections 1.500 and 2.250.

B. System Design, Development and Testing
This 'phase' of the project consists of the Contractor configuring and testing of the interfaces required under **Appendix E**. Contractor will provide the following interfaces: ADT Interface; Billing Interface; IPOLA Interface; Medication Reconciliation Interface; and WORx Integration Toolkit / Interfaces. The State will provide several initial feeds that Mediware will load into the system as part of the table build process. These feeds include: NDC Codes (required in the Formulary build), Physician Master and OLA (insurance) information. Once the standard interfaces are readied after internal testing by Contractor, the State can expect to develop and run technical and user acceptance testing. Contractor will provide operational and technical documentation and conduct Super-User Training for use of the Licensed Software as required herein.

Name of application: INFOSYS
Owner of application: Michigan Department of Community Health (MDCH) / Michigan Department of Information Technology (MDIT)
Details of interface: INFOSYS / Demographic - The State's Information System (INFOSYS). The INFOSYS is a mainframe application developed by MDIT which maintains the demographic information for the patients who reside in the state of Michigan mental health facilities. To identify the patient within the facility, each patient is assigned a unique case number. Vendor will be responsible for building an interface to load the patient demographic information.

To make pharmaceutical decisions and report pharmacy transactions, pharmacists must accurately and securely track the demographic information for each patient. The system must provide the capability to load patient demographic information from the INFOSYS. The load process must provide the capability for both on-demand and scheduled loads.

See **Appendix C-3** for file layout.

Name of application: INFOSYS
Owner of application: Michigan Department of Community Health (MDCH) / Michigan Department of Information Technology (MDIT)
Details of interface: INFOSYS / Billing – The State's Information System (INFOSYS). The INFOSYS is a mainframe application developed by MDIT which maintains the activity transactions for the patients who reside in the state of Michigan mental health facilities. To identify the patient within the facility, each patient is assigned a unique case number (Note: This case number is the same case number identified in Attachment 2 item 10-03). Vendor will be responsible for building an interface to feed the patient pharmaceutical activity into the INFOSYS.

To accurately record and bill, the INFOSYS maintains all activity services provided to the patient, including pharmaceutical services. The new system must provide on-demand capability to feed the pharmaceutical transactions that occurred for all patients for a specific date range into the INFOSYS.

See **Appendix C-3** for file layout

Name of application: Michigan Automated Prescription Services System (MAPS)

Owner of application: Michigan Department of Community Health (MDCH) / Michigan Department of Information Technology (MDIT)
Details of interface: Michigan Board of Pharmacy's Michigan Automated Prescription Services (MAPS) system for reporting medication orders by order type (e.g., controlled substances reporting). Use American Society for Automation in Pharmacy – version 2005 or above (ASAP 2005) file format.

Name of application: Economic Computerized Healthcare Ordering System (ECHO)
Owner of application: AmerisourceBergen Corporation
Details of interface: AmerisourceBergen ECHO System - Electronic order entry system for automatic updates to inventory with order receipt.

Name of application: Guaranteed Returns CVS. File Transfer
Owner of application: Guaranteed Returns
Details of interface: Interface for reconciliation of Returned Drugs with records of contracted Returned Goods processor; minimally to reconcile inventory when expired/damaged drugs are returned.

C. Implementation

Contractor shall fulfill its obligations under the Contract with respect to the implementation of the Contractor software, customizations, and interfaces licensed hereunder, including active patient data load, configuration, customization, and interfaces/integration. The Pilot implementation of the Core Functionality will be implemented in one location.

Deliverable(s):

1. Pilot MDCH Facility Pharmacy System Implementation
   a. Before statewide implementation, the Contractor shall conduct a Pilot implementation of WORx (with interfaces) at one location.
   b. The pilot start date and duration will be agreed upon with the State.
   c. The Pilot implementation shall consist of all of the implementation support identified in this activity with respect to WORx – namely:
      i. Active patient data load records as described herein
      ii. Training as described herein
      iii. Guidance to the State with respect to fulfillment of the State's obligations.
      iv. System implementation as described in the Project Plan
2. MDCH Facility Pharmacy System Implementation

   After a Pilot, WORx (with interfaces) will roll out to all locations within scope at a mutually agreeable schedule in accordance with the Project Plan.
   a. Prior to implementation, the Contractor will:
      i. Monitor progress against the Project Plan to assess whether each task is completed accurately and on schedule.
      ii. Communicate with the State Project Managers to provide status and escalate issues.
      iii. Participate with the implementation team to coordinate activities, discuss status, and resolve issues.
      iv. Coordinate implementation with training.
      v. Coordinate with the active patient data load team to address manual and automated data correction activities pre- and post-conversion for active patients as required herein without limiting the State's responsibility for the quality of the data provided.
      vi. Implement new workflow:
         1. Work with State staff (MDIT and MDCH) to assist the staff in planning the transition from the existing workflow to the new one.

vii. Provide onsite, as mutually agreed, post-implementation help to resolve workflow and application issues per Section 1.101.

3. Pilot MediCOE, MediMAR, MediREC System Implementation
   a. Before statewide implementation, the Contractor shall conduct a Pilot implementation of the MediCOE, MediMAR, MediREC at one location.
   b. The pilot start date, to begin no later than June 1, 2010 and duration will be agreed upon with the State.
   c. After the Pilot, the State, in consultation with Contractor, will roll-out Core MediMAR, MediCOE and MediREC to all locations within scope at a mutually agreeable schedule in accordance with the Project Plan.
4. Active Patient Data Load Plan
   b. Contractor will work with State staff to complete active patient data load as required herein. The customer will provide an extract of Active Patients from their source system in a flat file format. Contractor will load this data into WORx pharmacy system. Key fields to be loaded include medical record number (MRN), Visit ID, Patient Name, Bed, Location, Physician, Allergies and Insurance data for OLA. Current and previous medication orders for active patients will be included in WORx system by Contractor. The State is responsible for verifying this data and the accuracy of all information provided.
   d. The quality assurance tasks may consist of:
      i. Provide reviews of the MDCH Facility Pharmacy System data model(s) for integrity of the data model(s) is maintained.
      ii. Validate activities resulting in new system values are not in conflict with current production values.
      iii. Validate user security/setups in application security tables.
      iv. Assist with creation, and testing of scripts for active patient data load
   e. The conversion plan shall consist of:
      i. The extent of active patient data to be uploaded, sources of this information, and any unique issues
      ii. Description of the upload process
      iii. Indication of any State resources needed.
5. Deployment of Required and Optional Customizations

i. Contractor shall assist the State in a deployment of the customizations. Such assistance shall consist of up to 110 hours of Contractor assistance:
   1. Participation in a Kickoff Call / Planning & Analysis
   2. Technical assistance & Application Setup
   3. Process and Product Test
   4. Production Prep
   5. Sys Admin Support to achieve Productive Use
   6. Support Transition --Super User and Train the Trainer Training

Acceptance Criteria

Acceptance criteria for Software, Documentation, and Service Deliverables are referenced in Sections 1.500 and 2.250.

D. Training and Documentation

Provide training for both technical staff trainers on the Pharmacy Management system as required herein. Provide detailed technical and end user documentation of the new Pharmacy Management system. All training scheduled to be done on-site shall be on-site at the following locations:
Chandler Building, Lansing 48913
Caro Center, 2000 Chambers Road, Caro 48723

Center for Forensic Psychiatry, 8303 Platt Road, Saline 48176
Hawthorn Center, 18471 Haggerty Road, Northville 48168
Kalamazoo Psychiatric Hospital, 1312 Oakland Drive, Kalamazoo 49008
Walter Reuther Psychiatric Hospital, 30901 Palmer Road, Westland 48186

"Train the Trainer" Training (on-site system administrator, nursing staff, doctors, pharmacists, etc.)

Technical training for State individuals who will be working with the services contractor to configure the applications including establishing databases and interfaces, active patient data upload, customization, and upgrading the customized software.

System administration training for State personnel who will be responsible for ongoing maintenance and administration of the system.

Contractor will utilize a Train the Trainer approach for end user training. In this approach, a Contractor trainer will provide onsite application training for each customer facility covering the following applications: WORx Inpatient, MediCOE, MediMAR, MediREC and WORxPO. Training sessions generally range from five (5) days to seven (7) days and focus on application functionality. File building, configuration and/or system administration are not covered in these sessions since Contractor training on each of these topics will be provided separately as part of the implementation rollout. Finally, Contractor training will be geared to super users who in turn will be responsible for training the end users at each facility. Given the fact that not all products will roll out at the same time, one (1) additional instructor-led remote, hands on training session will be provided for each product closer to the rollout of that product. These training sessions will be for the Super Users from the initial face to face training. The length of this follow up training will vary from 1-2 days each, depending on the specific product being trained.

Subject to retention of ownership of intellectual property rights by Contractor, the physical embodiment of all training manuals, training plans and other documentation provided become the property of the State.

1. Materials
    a. The Contractor shall be responsible for providing its standard training materials and training materials that pertain to customizations procured herein.
    b. Subject to retention of ownership of intellectual property rights by Contractor, the physical embodiment of all training materials shall be delivered to, and become the property of the MDIT/DCH and State of Michigan, upon the completion of the system implementation.

    c. Provides electronic release notes with each release of the software so long as maintenance services are purchased.
    d. Provides System Admin Manual.
        i. The Systems Admin Manual shall consist of the following components:
            a. System architecture.
            b. High-level interaction between modules/packages.
            c. Backup procedures.
            d. Batch schedule and procedures.
            e. Standard system tasks such as starting up and shutting down software and servers.
        ii. The combination of the Systems Admin Manual and the electronic release notes should be sufficient to provide initial training for technical staff.

Acceptance Criteria
Acceptance criteria for Software, Documentation, and Service Deliverables are referenced in Sections 1.500 and 2.250.

E. Maintenance and Support
Software Maintenance, enhancement and support will be as described below.

Deliverable(s)

1. During the maintenance and support period, the Contractor will provide remote troubleshooting expertise with respect to the Licensed Software.
   a. Provide remote troubleshooting support to keep the Licensed Software operational in accordance with this Contract.
   b. Respond to support calls within 60 minutes for Level 1 (high) severity/priority calls, 2 business hours for Level 2 (medium) severity/priority calls.
   c. Provide an emergency toll-free number for immediate support.
   d. After hours response for Level 1 (high) severity/priority calls must be within 2 hours of notification.
   e. Level 1 is the most severe Program Error and represents a situation where all features and functions of the Licensed Software are unavailable and no practical alternate mode of operation is available.
   f. Level 2 indicates a problem in which certain features and functionality are not available and no practical alternate mode of operation is available. In this instance, the request shall be given to the next available programmer.
   g. Level 3 is the normal next-in-line priority assignment. At this level, requests are worked on in the order in which they are received.
   h. Problem Resolution. Level 1 technical consultation solutions will be sent to the State as soon as available. Level 2 and 3 technical consultation solutions shall be provided only for the current release level of the Licensed Software.
2. The maintenance period will begin in accordance with Appendix E. Contractor will provide a location, toll-free, as one point of contact to report system malfunction whether the malfunction is due to the Contractor's software or is of unknown origin. The Contractor will then assist with the provision of an appropriate remedy. The Contractor shall notify the State of any material errors or defects that have been fixed in previous or future releases that will address reported errors.
   a Contractor will work with MDCH/MDIT regarding data quality in the Pharmacy Management System; provided that, the State shall be responsible for any data verification it desires and the active patient data loaded will be only as good as the data provided by the State in an ASCII file.
   b. Plan and assist MDIT to perform the installation, including configuration, setup and testing of the Pharmacy Management System.

   The services being provided must conform to the State's Project Management Methodology. The State's Project Management Methodology web site is http://www.michigan.gov/dit/0,1607,7-139-30637_31101---,00.html

3. System Maintenance and Enhancement Activities.
   a. Standard maintenance services shall include using reasonable commercial efforts to repair or provide a patch or work around for all Program Errors that Contractor is able to reproduce except as otherwise specified herein. Standard maintenance services shall also include providing Updates, including those

modifications or enhancements made to the Licensed Software as required for the Licensed Software to comply with federal laws and regulations; provided that, Contractor is not required to provide Updates that are based on changes to laws other than federal laws or that require a substantial rewrite of the Licensed Software. So long as the State remains current on support payments and State complies with the terms and conditions of this Agreement, the objective shall be that the Licensed Software shall operate in accordance with the Documentation.

b. Standard maintenance services shall include work required to correct material defects in the system operation with the objective of causing the Licensed Software hereunder to conform to its documentation.

c. Changes to the Licensed Software will be provided, as mutually agreed, under Section 1.101(e) for changes that are necessary to meet:

i. New State policy requirements,

ii. New Federal regulations,

iii. New technology requested by the State, or

iv. Accommodate new or updated interfaces requested by the State.

v. System Enhancement

4. Adaptive and Preventive Maintenance Activities

a. Adaptive and preventive maintenance shall generally be provided by the State and addresses upgrades to the Licensed Software due to technical changes to system components to keep the Licensed Software maintainable, including the following services:

i. Upgrades or patches of the application server, Windows components, java virtual machine, operating system, RDMBS, or other system and application software.

ii. Software modifications and upgrades necessary because of expiring vendor support.

iii. Report distribution changes.

iv. Assistance to State with respect to disaster recovery planning and timely assistance with respect to recovery of the system comprising Licensed Software.

b. Upgrades and releases should be completed as part of a development release or a quarterly release.

5. Performance Maintenance Activities - Performance maintenance will be done by the State.

a. Performance maintenance consists of the following services:

i. Data table restructuring.

ii. Data purges and or archiving to reduce/improve data storage.

iii. Run time improvements.

iv. Replace utilities to reduce run time.

v. Potential problem correction.

vi. Data set expansions to avoid space problems.

b. Performance maintenance changes will be completed as part of a development release or quarterly release.

c. Activities that typically can be completed independent of a production release (e.g., data set expansions, data purges) may be completed on a more frequent basis (e.g., daily or weekly).

6. Subject to the terms and conditions of this Contract, Contractor shall provide standard maintenance services to the State for the Licensed Software. “Standard maintenance services” shall include repairing or providing a patch or work around for all Program Errors that Contractor is able to reproduce except as otherwise specified herein.

Standard maintenance services shall also include providing Updates, including those modifications or enhancements made to the Licensed Software as required to comply with federal laws and regulations; provided that, Contractor is not required to provide Updates that are based on changes to laws other than federal laws or that require a substantial rewrite of the Licensed Software. So long as the State remains current on support payments and State complies with the terms and conditions of this Agreement, the Licensed Software shall operate in accordance with the Documentation.

7. Priority Levels. The State may request, and Contractor shall provide, reasonable technical consultation by telephone 24 hours a day, 365 days of a year. Contractor shall maintain a log of technical consultation requests in a tracking system and a unique number shall be assigned to the State's request. That unique number shall be provided to the State for reference and communication. Contractor will assign to technical consultation requests one of three levels of priority:
8. Service Location. Contractor shall provide technical consultation from its business premises, except that Contractor, at its own discretion and expense, may dispatch a technical services representative to the State's facility for all Program Errors that Contractor is unable to correct by providing technical consultation from Contractor's premises. If such travel is performed by Contractor personnel and it is determined that the cause of the malfunction was user error, negligence, or software or hardware not provided by Contractor. The State will be responsible for paying the labor costs at Contractor's then standard rates and shall reimburse Contractor for all travel expenses incurred at then current posted State rates.
9. So long as the State remains current on support payments and State complies with the terms and conditions of this Agreement, Contractor shall make all Updates available to the State. Contractor reserves the right to determine the content and availability of all software, including without limitation, Updates. For purposes or clarification, the Parties agree that Updates shall include bug fixes, error corrections, changes required by Federal law and regulations and new features that are not offered by Contractor as separate modules or software packages. Interface service provided as part of maintenance is designed to keep the application in good working order and comply with interface specifications agreed to by Contractor and the State. Any enhancements or additions made to the Licensed Software as requested by the State are not part of these maintenance services and may increase the support charge by an amount which reflects the extent of the change. Documentation updates shall generally be distributed to the State with each Update. All Updates may be loaded only based upon instructions provided by Contractor's State service personnel. Contractor must be notified, in writing, before the loading of operating system software updates, third party software updates or installing new hardware to the System. Contractor shall provide assistance by telephone during normal business hours.
10. EXCLUSIONS. The following items are not provided as part of Maintenance Services but may be obtained from Contractor as Additional Services:

(a) custom programs developed by Contractor for the State which are not included in general releases to the Licensed Software;

(b) custom programs developed by the State using system tools (e.g., SQR, Infomaker) or commercially available software programs;

(c) Additional hardware that may be required to operate Licensed Software enhancements at an acceptable performance level;

(d) malfunctions caused by user error or negligence;

(e) state and/or local legal compliance requirements, unless paid for by the State on a time and materials basis at Contractor’s then current rates;

(f) annual update fees, if any, for third party software licenses or sublicensed software. The software publisher or equipment manufacturer may charge such fees to the State. All associated installation charges for updates to third party software or Sublicensed Software shall be the responsibility of the State;

(g) travel expenses incurred by Contractor employees in conjunction with performing non-standard Contractor services incurred at then current posted State rates;

(h) third party software maintenance or hardware products ;

(i) any major releases related to the operating system software and proprietary databases;

(j) data restoration; and

(k) support for a release of the Licensed Software that is not the then-current or immediately preceding release.

(l) Although Contractor may assist the State from time to time by answering questions or providing information regarding IT administration, preventative maintenance, and operating systems, such services are outside the scope of this support services.

11. CUSTOMER PARTICIPATION. Contractor's obligations are conditioned on the State fulfilling its obligations hereunder, including, without limitation:

(a) Providing Contractor with all information and assistance necessary to detect, simulate/reproduce and correct any Program Errors.

(b) Providing Contractor access to the System and its related operating environment through a VPN for the purpose of providing all Contractor services and confirming compliance with the terms and conditions of this support services; providing a suitable physical environment including, but not limited to, heat, light, ventilation, air conditioning, proper electrical power and grounding for the Licensed Software to be maintained as specified in Contractor user documentation.

(c) Procuring, installation, and maintenance of all non-Contractor communications media, including, but not limited to, a telephone within operational reach of the central installation site for diagnostic purposes and telephone equipment and lines for remote transmission of information.

(d) Causing all equipment and facilities which are used in connection with the operation or security of the Licensed Software and System to be maintained properly and in good operating condition as specified by the applicable manufacturer. All charges for such media and services shall be the sole responsibility of the State.

(e) Installing Licensed Software Updates within ninety (90) days of their release. Contractor has no obligation to support more than two (2) versions of the Licensed Software; therefore State must use the then-current or immediately preceding release.

(e) Maintaining regular back-ups of data files, application source code (if applicable) and operating system software.

(f) Fulfilling all obligations of the State as specified in the Project Plan.

(g) If, upon the State's request, Contractor personnel travel to the State's site to perform any support services, the State shall pay for such personnel at Contractor's then standard rates and shall reimburse Contractor for all reasonable travel incurred at then current posted State rates.

(h) Providing Contractor notice of its intention to relocate the central site, or any portion thereof, from the site set forth in this SOW promptly after becoming aware of the same.

(i) Strict compliance with the terms and conditions of the Contract, including without limitation, the terms and restrictions on the license grant.

Acceptance Criteria

Acceptance criteria for Software, Documentation, and Service Deliverables are referenced in Sections 1.500 and 2.250.

F. Other Services

System Enhancement Activities / Scope Modifications– Contractor will provide future development services and/or software enhancement meeting the definitions below **utilizing a reserved bank of hours 500 hours per year**:

System enhancements / scope modifications consist of changes to the system that are necessary to meet:

a. New State policy or legal requirements,
b. New Federal regulations (except changes based on Federal regulations that Contractor makes available generally to its customers purchasing maintenance),
c. New technology requested by the State, or
d. Accommodate new or updated interfaces requested by the State.

Deliverable(s)

- Updated Application Source Code Artifacts - The Contractor will follow the agreed upon procedures to modify, test, and implement code.
- Updated Documentation
- Updated Training and Transition of Knowledge of SOM support staff
  a. The Contractor will update any documentation that has been previously created by the Contractor to reflect the updated and enhanced functionality of the application/system.
  b. The Contractor will provide updated versions of all systems, user, training, and operations documentation prior to the implementation date.
  c. Documentation must meet all requirements of the approved Documentation Standards Plan and be provided in electronic and hard copy, if requested by State.
  d. Documentation consists of:
     i. Complete system documentation.
     ii. User manuals (administrator and authorized user).
     iii. Training manuals.
     iv. Glossary
     v. Updates to the Help Desk Guide to reflect new functionality as it is released.
     vi. All operations procedures not covered in a user manual and requested by the State.

G. Hardware Purchasing

The State reserves the option to purchase hardware for the Pharmacy Management System configuration from the Contractor. Contractor must include the cost per item, once specifications are agreed upon between the Contractor and State staff.

For any hardware procured by the State, the State shall have sole responsibility for maintenance of such hardware. Any delays in Contractor Performance as a result of such hardware shall not be the responsibility of the contractor.

All State acquired hardware necessary for installation of the Contractor's products shall be functioning pursuant to the Contractor's recommendations.

II. Requirements

A. Functional Requirements – Functional requirements for the application are listed in the table of **Appendix A**. Contractors must provide the information requested in the table.

B. Technical Requirements – Technical requirements for the solution are found in **Appendix B**. Contractors must provide the information requested in the table.

1.200 Roles and Responsibilities

1.201 Contractor Staff, Roles, and Responsibilities

A. Contractor Staff

The Contractor will commit that staff identified in its proposal will actually perform the assigned work.

The **Single Point of Contact (SPOC)** will be Donald Fritz. The duties of the SPOC shall consist of:

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

The State reserves the right to require a change in the current SPOC if the assigned SPOC is not, in the opinion of the State, adequately serving the needs of the State; provided that Contractor shall be relieved of any delay caused by the removal of a SPOC.

The Contractor will provide a (Project Manager) to interact with the designated personnel from the State to facilitate a smooth transition to the new system. The project manager/technical lead will coordinate all of the activities of the Contractor personnel assigned to the project and create all reports required by State. The Contractor's project manager/technical lead responsibilities consist of:

- Manage all defined Contractor responsibilities in this Scope of Services.
- Manage Contractor's subcontractors, if any
- Develop the project plan and schedule, and update as needed
- Serve as the point person for all project issues
- Coordinate and oversee the day-to-day project activities of the project team
- Assess and report project feedback and status
- Escalate project issues, project risks, and other concerns
- Review all project deliverables and provide feedback
- Proactively propose/suggest options and alternatives for consideration
- Utilize change control procedures
- Prepare project documents and materials
- Manage and report on the project's budget

The Contractor will provide, and update when changed, an organizational chart indicating lines of authority for personnel involved in performance of this Contract on the State's facilities. This chart should also show lines of authority to the next senior level of management and indicate who within the firm will have prime responsibility and final authority for the work.

Any Key Personnel substitution must have the prior approval of the State. Contractor has identified the following as Key Personnel roles for this project:

1. Project Manager – Larry Hughes
2. Technical Lead – John Chauvin
3. Clinical Lead – Mary Niewoehner

The Contractor shall provide sufficient qualified staffing to satisfy the deliverables of this Statement of Work.

B. On Site Work Requirements

1. Location of Work

The work is to be performed, completed, and managed at Contractor's facilities and, as mutually agreed, the following locations:
Chandler Building
300 E. Michigan Ave
Lansing, MI 48913

2. Hours of Operation:

a. Normal State working hours are 8:00 a.m. to 5:00 p.m. EST, Monday through Friday, with work performed as necessary after those hours to meet project deadlines. No overtime will be authorized or paid.

b. The State is not obligated to provide State management of assigned work outside of normal State working hours. The State reserves the right to modify the work hours in the best interest of the project, provided that any deadline for performance of the Contractor is delayed for a time proportionate to any reduction in work hours or State initiated delay.

c. Contractor personnel performing services on State facilities shall observe the same standard holidays as State employees. The State does not compensate for holiday pay.

3. Travel:

a. No travel or expenses will be reimbursed. This includes travel costs related to training provided to the State by Contractor.

b. Travel time will not be reimbursed.

4. Additional Security and Background Check 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; provided that, the State shall pay for all security and background checks.

1.202 State Staff, Roles, and Responsibilities

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

- Work space
- Minimal clerical support
- Desk
- Telephone
- PC workstation
- Printer
- Access to copiers and fax machine
- High-speed Internet access
- Remote Access to the job site
- Parking
- Training facilities
- IT environment/designated platform set forth in **Appendix C-2**
- Fulfill MDIT's responsibilities under the Project Plan

The State project team will consist of Executive Subject Matter Experts (SME's), project support, MDIT technical support, and a MDIT and Agency project manager:

Executive Subject Matter Experts

The Executive Subject Matter Experts representing the business units involved will provide the vision for the business design and how the application shall provide for that vision. They shall be available on an as needed basis. The Executive SME's will be empowered to:

- Resolve project issues in a timely manner
- Review project plan, status, and issues
- Resolve deviations from project plan
- Provide acceptance sign-off
- Utilize change control procedures
- Provide for timely availability of State resources

- Make key implementation decisions, as identified by the MDIT project manager and/or SPOC, within 48-hours of their expected decision date.

Name	Agency/Division	Title
Cynthia Kelly	MDCH, Hospital, Center, and Forensics Mental Health Services	Director
William Plath	MDCH, Forensic Center	Registered Pharmacist

State Project Manager(s)
MDCH/MDIT-DCH will provide a Project Manager(s) who will be responsible for the State's infrastructure and coordinate with the Contractor in determining the system configuration.

The State's Project Manager(s) will provide the following services:
- Provide State facilities, as needed
- Coordinate the State resources necessary for the project
- Facilitate coordination between various external contractors
- Facilitate communication between different State departments/divisions
- Provide acceptance and sign-off of deliverable/milestone
- Resolve project issues
- Escalate outstanding/high priority issues
- Utilize change control procedures
- Conduct regular and ongoing review of the project to confirm that it meets original objectives and requirements
- Document and archive all important project decisions
- Arrange, schedule and facilitate State staff attendance at all project meetings.

Name	Agency/Division	Title
Patricia Mark	MDCH, Hospital, Center, and Forensics Mental Health Services	Project Manager
Tonnie Diffin	MDIT/Agency Services - DCH	Project Manager

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

Name	Agency/Division	Title
Sara Williams	MDIT/Agency Services - DCH	Contract Administrator

Executive Sponsors
MDCH/MDIT shall provide Executive Sponsors whose duties shall include, but not be limited to, sign-off of invoices and issues escalated to Level 4 - Executive Sponsors as per Section 1.401 Issue Management

Name	Agency/Division	Title
Cynthia Kelly	MDCH, Hospital, Center, and Forensics Mental Health Services	Director
Linda Myers	MDIT, Agency Services-DCH	Client Service Director

1.203 Other Roles and Responsibilities – As described in the Project Plan

1.300 Project Plan

1.301 Project Plan Management

Preliminary Project Plan – (Appendix D)
Contractor provided a Preliminary Project Plan with the proposal
A Final Project Plan will be required as stated in Article 1, Section 1.301.

Orientation Meeting
Upon **ten (10)** working days from execution of the Contract, the Contractor shall be required to attend an orientation meeting to discuss the content and procedures of the Contract. The meeting will be held in Lansing, Michigan, at a date and time mutually acceptable to the State and the Contractor. The State shall bear no cost for the time and travel of the Contractor for attendance at the meeting.

Performance Review Meetings
The State shall require the Contractor to attend meetings twice a month, at a minimum, to review the Contractor's performance under the Contract. The meetings will be held in **Lansing**, Michigan or by teleconference. The State shall bear no cost for the time and travel of the Contractor for attendance at the meeting.

Project Control

1. The Contractor will carry out this project under the direction and control of MDIT, MDCH.
2. Within ten (10) working days of the orientation meeting, the Contractor will submit to the State project manager(s) for final approval of the project plan. Planning efforts during the first 10 working days will involve all Contractor resources working with the State to refine the schedule as needed to meet contract requirements. This project plan must be in agreement with Article 1, Section 1.104 Work and Deliverables, and shall consist of the following:
   - The Contractor's project organizational structure.
   - The Contractor's planned staffing table with names and title of personnel assigned to the project. This must be in agreement with staffing of accepted proposal. Necessary substitutions of Key Personnel due to change of employment status and other unforeseen circumstances may only be made with prior approval of the State.
   - The project work breakdown structure (WBS) showing sub-projects, activities and tasks, and resources required and allocated to each.
   - The time-phased plan in the form of a graphic display, showing each event, task, and decision point in the WBS.
3. The Contractor will manage the project in accordance with the State Unified Information Technology Environment (SUITE) methodology, which includes standards for project management, systems engineering, and associated forms and templates which is available at http://www.michigan.gov/suite
   a. Contractor will use an automated tool for planning, monitoring, and tracking the Contract's progress and the level of effort of any Contractor personnel spent performing Services under the Contract. Contractor will use both Microsoft Project and Unanet Reporting Tools for planning, staffing, and time tracking of Contractor resources throughout the project lifecycle. The tool shall have the capability to produce:
      - Staffing tables with names of personnel assigned to Contract tasks.
      - Project plans showing tasks, subtasks, deliverables, and the resources required and allocated *to each (including detailed plans for all Services to be performed within the next thirty (30) calendar days, updated semi-monthly).*

      Updates must consist of actual time spent on each task and a revised estimate to complete.

      Graphs showing critical events, dependencies and decision points during the course of the Contract.

b. Any tool(s) used by Contractor for such purposes must produce information of a type and in a manner and format that will support reporting in compliance with the Contract.

1.302 Reports

Contractor will use its standard reporting templates and will provide reports in accordance with the same and in accordance with the Project Plan. Such reports may include:

- Bi-Weekly project status
- Monthly Updated project plan
- Summary of activity during the report period
- Accomplishments during the report period
- Deliverable status
- Schedule status
- Action Item status
- Issues
- Change Control
- Repair status
- Maintenance Activity

1.400 Project Management

1.401 Issue Management

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

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

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

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

Level 1 – Business leads/Project Team Owners
Level 2 – Project Managers/Resource Owners
Level 3 –Subject Matter Experts (SME's)/Product Manager/R&D
Level 4 –Executive Sponsors

The Contractor Project Manager has the responsibility of working to identify and resolve issues at the lowest possible escalation level, thus minimizing any impact to the overall project goals / deliverables.]

1.402 Risk Management

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

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

A risk management plan format shall be submitted to the State for approval within twenty (20) business days after the effective date of the Contract

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

1.403 Change Management

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

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

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

The Contractor will employ the change control methodologies to justify changes in the processing environment, and use reasonable efforts to prevent such changes from adversely affect performance or availability.
Contractor shall be under no requirement to perform any Contract Change until Contractor agrees to such Change in writing.

Contractor and the State will jointly manage to the scope of signed contracts. Contractor will provide an executable quotes for any additional or out of scope effort using standard Contractor Price Quote requests.

The assigned Contractor Project Manager will be the primary point of contact for discussion and determination of next steps on any out of scope items.

Contractor and the State will both agree to work within the scope of signed contract and follow appropriate processes for approval of out of scope efforts.

1.500 Acceptance

1.501 Criteria

The following criteria will be used by the State to determine acceptance of Services and/or Deliverables provided under this Contract. Acceptance will be as specified below and in Section 2.250.

A. Document Deliverables - Documents consist of plans, design documents, project schedules, user guides, and procedure manuals.

1. Documents are dated and in electronic format.
2. Requirements documents are reviewed and updated throughout the development process to assure requirements are delivered in the final product.
3. Draft documents are not accepted as final deliverables.
4. The documents will be reviewed and accepted in accordance with the requirements of the Contract.
5. The State will review technical documents within 8 working days of receipt.
   a. Approvals will be written and signed by the State's Project Managers with assistance from other State resources and impacted Agencies.

b. Unacceptable issues will be documented and submitted to the Contractor.
c. After issues are resolved or waived, the Contractor will resubmit documents for approval within 8 working days of receipt.

B. Software Deliverables - Software consists of the software products listed in Section 1.104(a), (b), and (c).
1. Beta software is not accepted as final deliverable.
2. The software will be reviewed and accepted in accordance with the requirements of the Contract.
3. MDCH and MDIT will review software within a mutually agreed upon timeframe for compliance with the Contract requirements.
   a. Approvals will be written and signed by MDCH and MDIT Project Managers.
   b. Unacceptable issues will be documented and submitted to the Contractor.
   c. After issues are resolved or waived, the Contractor will resubmit software for approval within 30 days of receipt.
4. Software is installed and configured by Contractor, with assistance from the State, in an appropriate environment before commencement of the pilot.
5. Contractor will provide installation instructions at least one (1) month before pilot commences.
6. Contingency plans, de- installation procedures are provided by the Contractor.
7. Final Acceptance will be as defined in 2.256.
8. Testing will demonstrate the system's compliance with:
   a. Functional - the capabilities of the system with respect to the functions and features described in the Contract.
9. The pilot period will be the test period for the Software Deliverables.
   b. Performance - the ability of the system to perform the workload throughput requirements in accordance with the Contract. All problems should be completed satisfactorily within the mutually agreed time frame.
   c. Approvals will be requested by Contractor at the time of delivery of the Deliverable in writing and signed-off by MDCH and MDIT Project Managers.
      i. Unacceptable issues will be documented and submitted to the Contractor.
      ii. After issues are resolved or waived, the Contractor will resubmit test software, data and results for approval within 30 days of receipt of the notice of rejection.

C. Service Deliverables - Services consist of training, active patient data load, and customizations listed in Section 1.104(d), (e), and (f).
1. The Service Deliverables will be accepted in accordance with the requirements of the Contract.
2. The State will review a Request for Approval of Services within 8 working days of completion or implementation.
   a. Approvals will be requested by Contractor at the time of delivery of the Deliverable in writing and signed-off by the State's Project Managers.
   b. Unacceptable issues will be documented and submitted to the Contractor.
   c. After issues are resolved or waived, the Contractor will resubmit a Request for Approval of Services for approval within 8 working days of receipt.
3. The State will review active patient data loaded within 8 working days of completion.
   a. Approvals will be written and signed by the State's Project Managers.
   b. Unacceptable issues will be documented and submitted to the Contractor.
   c. After issues are resolved or waived, the Contractor will resubmit a request for approval within 30 days of receipt.
4. State super-users are properly trained and supplied with the proper tools and documentation to support, upgrade, monitor, operate, and configure the system in accordance with the requirements of this Contract.
5. Contractor has the tool and connectivity installed in accordance with Contract requirements.

1.502 Final Acceptance

Final acceptance/acceptance will only be a criteria for payment for those Milestone payments expressly tied to Final Acceptance under Appendix E ("Acceptance Modules"). The process for Final Acceptance will be described in Section 2.250, but will be based on the following specifications:

1. Deployment of the applicable Acceptance Module meeting all required functional requirements contained in **Appendix A**. The applicable Acceptance Module must be available for utilization at all the licensed facilities in the production environment for a minimum of 90 days.
2. Deployment of the applicable Acceptance Module meeting all required technical requirements contained in **Appendix B**. The applicable Acceptance Module must be available for utilization at all the licensed facilities in the production environment for a minimum of 90 days.
3. The Contractor shall deliver an end-to-end testing plan for the applicable Acceptance Module.
4. All testing listed in Article 1; Statement of Work with respect to the applicable Acceptance Module, as Contractor's responsibility will be completed.
5. The Contractor and State will need to conduct an end-to-end testing of the Licensed Software, and the Contractor will need to adequately resolve all errors that interfere with the features or functionality "bug" identified during the scheduled testing event.
6. All bugs found as a result of the testing must be corrected.
7. All Deliverables listed in Article 1, Statement of Work with respect to the applicable Acceptance Module, will be delivered.
8. Completion of Super -User and Train the Trainer training for the MDCH Facility Pharmacy System with respect to the applicable Acceptance Module.

1.600 Compensation and Payment

1.601 Compensation and Payment

Method of Payment

Except as otherwise agreed and/or mutually agreed changes to the scope, the project will be paid on a firm, fixed price deliverable-basis.

Travel

Except as otherwise agreed with respect to travel to be reimbursed as approved herein and incurred in accordance with the State's posted reimbursement rates, The State will not pay for any travel expenses, including hotel, mileage, meals, parking, etc. Travel time will not be reimbursed

Statements of Work and Issuance of Purchase Orders

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

- The parties agree that any document external to this Contract (for example, Internet web site addresses) but referenced herein shall be incorporated as such document exists at the time of execution of this Contract.

Invoicing

Contractor will submit properly itemized invoices to the "Bill to" Address on Purchase Order. Invoices must provide and itemize, as applicable:

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

The State may pay maintenance and support charges on a monthly basis, in advance. Payment of maintenance service/support of less than one (1) month's duration shall be prorated at 1/30th of the basic monthly maintenance charges for each calendar day.

Incorrect or incomplete invoices will be returned to Contractor for correction and reissue with the objective that they be returned prior to the time when payment would be due.

1.602 Holdback

The State shall have the right to hold back an amount equal to **ten** percent (**10%**) of all amounts invoiced by Contractor for Services/Deliverables. The amounts held back shall be released to Contractor in accordance with Appendix E**.**

ARTICLE 2, TERMS AND CONDITIONS

2.000 Contract Structure and Term

2.001 Contract Term

This Contract is for a period of five (5) years beginning November 9, 2009 through November 8, 2014. All outstanding Purchase Orders must also expire upon the termination (cancellation for any of the reasons listed in Section 2.130) of the Contract, unless otherwise extended under the Contract. Absent an early termination for any reason, Purchase Orders issued but not expired, by the end of the Contract's stated term, will remain in effect for the balance of the fiscal year for which they were issued.

2.002 Options to Renew

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

2.003 Legal Effect

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

Except as otherwise agreed in writing by the parties, the State assumes no liability for costs incurred by Contractor or payment under this Contract, until Contractor is notified in writing that this Contract (or Change Order) has been approved by the State Administrative Board (if required), approved and signed by all the parties, and a Purchase Order against the Contract has been issued.

2.004 Appendices, Attachments & Exhibits

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

2.005 Ordering

The State will issue a written Purchase Order, Blanket Purchase Order, Direct Voucher or Procurement Card Order, which must be approved by the Contract Administrator or the Contract Administrator's designee, to order any Services/Deliverables under this Contract. All orders are subject to the terms and conditions of this Contract. No additional terms and conditions contained on either a Purchase Order or Blanket Purchase Order apply unless they are also specifically contained in that Purchase Order or Blanket Purchase Order's accompanying Statement of Work.

2.006 Order of Precedence

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

Notwithstanding the identification of any functionality or requirements requiring a modification per **Appendix A** or **Appendix B**, the only customizations to be provided are identified in **Appendix C**.

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

2.007 Headings

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

2.008 Form, Function & Utility

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

2.009 Reformation and Severability

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

2.010 Consents and Approvals

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

2.011 No Waiver of Default

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

2.012 Survival

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

2.020 Contract Administration

2.021 Issuing Office

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

Jacque Kuch
Buyer, Purchasing Operations
Department of Management and Budget
Mason Bldg, 2nd Floor
PO Box 30026
Lansing, MI 48909
Email: kuchj@michigan.gov
Phone: 517-241-0239

2.022 Contract Compliance Inspector

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

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

Sara Williams, Contract Administrator
DCH Systems Development Division
Michigan Department of Information Technology
Office: (517)335-1277
Fax: (517)373-3720
300 E. Michigan Ave.
Lansing, MI 48913
Williamss11@Michigan.gov

2.023 Project Manager

The following individuals will oversee the project for the State of Michigan:

Patricia L. Mark
989.773.7921 ext 2010
Markp@michigan.gov

Tonnie Diffin
MDIT/Agency Services - DCH
DiffinT@michigan.gov

The following individual will oversee the project for Contractor:

Larry M. Hughes, PMP ®
Office: (913) 307-1075
Mobile: (913) 378-4238
Larry.Hughes@Mediware.Com

2.024 Change Requests

The State reserves the right to request from time to time any changes to the requirements and specifications of the Contract and the work to be performed by the Contractor under the Contract, but such changes shall only become effective upon a mutually written agreement executed by each of Contractor and State setting forth such changes. During the course of ordinary business, it may become necessary for the State to discontinue certain business practices or create Additional Services/Deliverables as requested in accordance with the Change Requests. At a minimum, to the extent applicable, the State would like the Contractor to provide a detailed outline of all work to be done, including tasks necessary to accomplish the Services/Deliverables, timeframes, listing of key personnel assigned, estimated hours for each individual per task, State responsibilities, and a complete and detailed cost justification.

Changes to any services or Licensed Software required to comply with ***changes*** to the State Unified Information Technology Environment (SUITE), Enterprise IT Policies, Standards and Procedures, Enterprise IT Security Policy and Procedures, IT Strategic Plan, IT eMichigan Web Development Standard Tools, Agency Specific Technical Environment shall be deemed Additional Services.

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

If the State requests or directs the Contractor to perform any services or provide deliverables that are consistent with and similar to the Services/Deliverables being provided by the Contractor under the Contract, but which the Contractor reasonably and in good faith believes are not included within the Statements of Work, then before performing such services or providing such deliverables, the Contractor shall notify the State in writing that it considers the services or deliverables to be an Additional Service/Deliverable for which the Contractor should receive additional compensation. Any work performed before the Contractor gives the State notice of New Work or a change that would -- but for the failure to give notice -- be New Work or a change shall be conclusively considered to be in-scope, not New Work. If the Contractor does so notify the State, then such a service or deliverable shall be governed by the Change Request procedure in this Section.

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

1. Change Request at State Request
   If the State should require Contractor to perform New Work, Additional Services or make changes to the Services that would affect the Contract completion schedule or the amount of compensation due Contractor (a "Change"), the State shall submit a written request for Contractor to furnish a proposal for carrying out the requested Change (a "Change Request").
2. Contractor Recommendation for Change Requests:
   Contractor shall be entitled to propose a Change to the State, on its own initiative, should it be of the opinion that this would benefit the Contract.
3. Upon receipt of a Change Request or on its own initiative, Contractor shall examine the implications of the requested Change on the technical specifications, Contract schedule and price of the Deliverables and Services and shall submit to the State without undue delay a written proposal for carrying out the Change. Contractor's proposal will include any associated changes in the technical specifications, Contract schedule and price and method of pricing of the Services. If the Change is to be performed on a time and materials basis, the Amendment Labor Rates shall apply to the provision of such Services. If Contractor provides a written proposal and should Contractor be of the opinion that a requested Change is not to be recommended, it shall communicate its opinion to the State but shall nevertheless carry out the Change as specified in the written proposal if the State directs it to do so.
4. By giving Contractor written notice within a reasonable time, the State must be entitled to accept a Contractor proposal for Change, to reject it, or to reach another agreement with Contractor. Should the parties agree on carrying out a Change, a written Contract Change Notice must be prepared and issued under this Contract, describing the Change and its effects on the Services and any affected components of this Contract (a "Contract Change Notice").
5. No proposed Change must be performed until the proposed Change has been specified in a duly executed Contract Change Notice issued by the Department of Management and Budget, Purchasing Operations.
6. If the State requests or directs the Contractor to perform any activities that Contractor believes constitute a Change, the Contractor must notify the State that it believes the requested activities are a Change before beginning to work on the requested activities. Any work performed before the Contractor gives the State notice of New Work or a change that would -- but for the failure to give notice -- be New Work or a change shall be conclusively considered to be in-scope, not New Work. If the Contractor commences performing work outside the scope of this Contract and then ceases performing that work, the Contractor must, at the request of the State, retract any out-of-scope work that would adversely affect the Contract.

2.025 Notices

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

Business Day after being sent by a nationally recognized overnight express courier with a reliable tracking system.
State:

State of Michigan
Purchasing Operations
Attention: Jacque Kuch
PO Box 30026
530 West Allegan
Lansing, Michigan 48909

Contractor: Mediware Information Systems, Inc.
Rob Weber, Senior Vice President and General Counsel
1900 Spring Road, Suite 450
Oak Brook, IL 60523

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

2.026 Binding Commitments

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

2.027 Relationship of the Parties

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

2.028 Covenant of Good Faith

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

2.029 Assignments

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

Notwithstanding the foregoing: (i) Contractor may assign this Contract to an affiliate or in connection with any merger, reorganization or sale of substantially all of Contractor's assets used to provide the services or other change of control transaction (i.e. not an assignment of this Contract alone) without any consent from the State; and (ii) the State may assign the Contract to any other State agency, department, division or department without the prior consent of Contractor.

If either party intends to assign the Contract or any of such party's rights or duties under the Contract except in connection with a merger, reorganization or sale of substantially all of Contractor's assets used to provide the services or other change of control transaction, such party must notify the other party in writing at least 90 days before the assignment. The assigning party also must provide the other party with adequate information about the assignee within a reasonable amount of time before the assignment for the other party to determine whether to approve the assignment.

2.030 General Provisions

2.031 Media Releases

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

2.032 Contract Distribution

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

2.033 Permits

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

2.034 Website Incorporation

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

2.035 Future Bidding Preclusion

Contractor acknowledges that, to the extent this Contract involves the creation, research, investigation or generation of a future RFP; it may be precluded from bidding on the subsequent RFP. The State reserves the right to disqualify any bidder if the State determines that the bidder has used its position (whether as an incumbent Contractor, or as a Contractor hired to assist with the RFP development, or as a Vendor offering free assistance) to gain a competitive advantage on the RFP

2.036 Freedom of Information

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

2.037 Disaster Recovery

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

2.040 Financial Provisions

2.041 Fixed Prices for Services/Deliverables

Each Statement of Work or Purchase Order issued under this Contract shall specify (or indicate by reference to the appropriate Contract Exhibit) the firm, fixed prices for all Services/Deliverables, and the associated payment milestones and payment amounts, without limiting the State's obligation to pay as set forth in the payment terms of this Contract. The State may make progress payments to the Contractor when requested as work progresses, but not more frequently than monthly, in amounts approved by the Contract Administrator, after negotiation or as specified in this Contract. Contractor must show verification of measurable progress at the time of requesting progress payments.

2.042 Adjustments for Reductions in Scope of Services/Deliverables

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

2.043 Services/Deliverables Covered

For all Services/Deliverables to be provided by Contractor (and its Subcontractors, if any) under this Contract, the State shall not be obligated to pay any amounts in addition to the charges specified in this Contract except as otherwise agreed and/or for any agreed change. For purposes of this Article 2, all Service Deliverables shall be treated as Services.

2.044 Invoicing and Payment – In General

a. Each Statement of Work issued under this Contract shall list (or indicate by reference to the appropriate Contract Exhibit) the prices for all Services/Deliverables, equipment and commodities to be provided, and the associated payment milestones and payment amounts.

b. Each Contractor invoice will show details as to charges by Service/Deliverable component and location at a level of detail reasonably necessary to satisfy the State's accounting and charge-back requirements. Invoices for Services performed on a time and materials basis will show the number of hours of Services performed during the billing period and the applicable hourly billing rate. Prompt payment by the State is contingent on the Contractor's invoices showing the amount owed by the State minus any holdback amount to be retained by the State in accordance with **Section 1.064**.

c. Correct invoices will be due and payable by the State, in accordance with this Contract and the State's standard payment procedure as specified in 1984 Public Act No. 279, MCL 17.51 et seq., within 45 days after receipt, provided the State determines that the invoice was properly rendered.

d. Contract Payment Schedule

1. MDIT request for deliverable-based payment.
   The Contractor may submit requests for payment of deliverable-based payments not more frequently than monthly in accordance with the payment terms specified in this Contract an in a form and manner acceptable to the **MDIT Project Manager**. Unless otherwise authorized by the **MDIT Project Manager**, all performance-based payments in any period for which payment is being requested shall be included in a single request, appropriately itemized and totaled.

2. Approval and payment of requests.
   Except with respect to payments as specified in accordance with the requirements of this Contract (to the extent permitted under applicable law), the Contractor shall not be entitled to payment of a request for performance-based payment prior to successful accomplishment of the event or performance criterion for which payment is requested. The Contract Administrator may, at any time, require the Contractor to substantiate the successful performance of any event or performance criterion in accordance with this Contract, which has been or is represented as being payable.

The approval by the Contract Administrator of a request for performance-based payment does not constitute an acceptance by the Government and does not excuse the Contractor from performance of obligations under this Contract.

2.045 Pro-ration

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

2.046 Antitrust Assignment

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

2.047 Final Payment

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

2.048 Electronic Payment Requirement

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

2.050 Taxes

2.051 Employment Taxes

Contractors are expected to collect and pay all applicable federal, state, and local employment taxes based on the employment of its employees and personnel, including the taxes.

2.052 Sales and Use Taxes

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

2.060 Contract Management

2.061 Contractor Personnel Qualifications

All persons assigned by Contractor to the performance of Services under this Contract must be employees of Contractor or its majority-owned (directly or indirectly, at any tier) subsidiaries (or a State-

approved Subcontractor) and must be fully qualified to perform the work assigned to them. Contractor must include a similar provision in any subcontract entered into with a Subcontractor. For the purposes of this Contract, independent contractors engaged by Contractor solely in a staff augmentation role must be treated by the State as if they were employees of Contractor for this Contract only; however, the State understands that the relationship between Contractor and Subcontractor is an independent contractor relationship.

2.062 Contractor Key Personnel

1. As specified in Article 1, the Contractor has provided the Contract Compliance Inspector with the names of the Key Personnel.
2. Key Personnel must be dedicated as defined in the Statement of Work to the Project for its duration in the applicable Statement of Work with respect to other individuals designated as Key Personnel for that Statement of Work.
3. The State will have the right to recommend and approve in writing the initial assignment, as well as any proposed reassignment or replacement, of any Key Personnel. Before assigning an individual to any Key Personnel position, Contractor will notify the State of the proposed assignment, will introduce the individual to the appropriate State representatives, and will provide the State with a resume and any other information about the individual reasonably requested by the State. The State reserves the right to interview the individual before granting written approval. In the event the State finds a proposed individual unacceptable, the State will provide a written explanation including reasonable detail outlining the reasons for the rejection.
4. Contractor must not remove any Key Personnel from their assigned roles or the Contract without the prior written consent of the State. The Contractor's removal of Key Personnel without the prior written consent of the State is an unauthorized removal ("Unauthorized Removal"). Unauthorized Removals does not include replacing Key Personnel for reasons beyond the reasonable control of Contractor, including illness, disability, leave of absence, personal emergency circumstances, resignation or for cause termination of the Key Personnel's employment. Unauthorized Removals does not include replacing Key Personnel because of promotions or other job movements allowed by Contractor personnel policies or Collective Bargaining Agreement(s) as long as the State receives prior written notice before shadowing occurs and Contractor provides 30 days of shadowing unless parties agree to a different time period. The Contractor with the State must review any Key Personnel replacements, and appropriate transition planning will be established. Any Unauthorized Removal may be considered by the State to be a material breach of the Contract, in respect of which the State may elect to exercise its termination and cancellation rights.

2.063 Re-assignment of Personnel at the State's Request

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

2.064 Contractor Personnel Location

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

2.065 Contractor Identification

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

2.066 Cooperation with Third Parties

Contractor agrees to cause its personnel and the personnel of any Subcontractors to cooperate with the State and its agents and other contractors including the State's Quality Assurance personnel, provided that all such agents and contractors have executed a Non-Disclosure Agreement in form acceptable to Contractor. As reasonably requested by the State in writing, the Contractor will provide to the State's agents and other contractors reasonable access to Contractor's Project personnel, systems and facilities to the extent the access relates to activities specifically associated with this Contract and will not interfere or jeopardize the safety or operation of the systems or facilities. The State acknowledges that Contractor's time schedule for the Contract is very specific and agrees not to unnecessarily or unreasonably interfere with, delay or otherwise impeded Contractor's performance under this Contract with the requests for access and that Contractor shall be relieved from responsibility resulting from any delays resulting from such access.

2.067 Contract Management Responsibilities

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

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

2.068 Contractor Return of State Equipment/Resources

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

2.070 Subcontracting by Contractor

2.071 Contractor full Responsibility

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

2.072 State Consent to delegation

Contractor shall not delegate any duties under this Contract to a Subcontractor unless the Department of Management and Budget, Purchasing Operations has given written consent to such delegation. The State shall have the right of prior written approval of all Subcontractors and to require Contractor to

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

2.073 Subcontractor bound to Contract

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

2.074 Flow Down

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

2.075 Competitive Selection

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

2.080 State Responsibilities

2.081 Equipment

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

2.082 Facilities

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

2.090 Security

2.091 Background Checks

On a case-by-case basis, the State may investigate the Contractor's personnel before they may have access to State facilities and systems. The scope of the background check is at the discretion of the State and the results will be used to determine Contractor personnel eligibility for working within State facilities and systems. The investigations will include Michigan State Police Background checks (ICHAT) and may include the National Crime Information Center (NCIC) Finger Prints. Proposed Contractor personnel may be required to complete and submit an RI-8 Fingerprint Card for the NCIC Finger Print Check. Any request for background checks will be initiated by the State and will be reasonably related to the type of work requested. To the extent Contractor employees elect not to participate in the background check process, Contractor will propose alternate employees.(new text)

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

2.092 Security Breach Notification

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

2.093 Reserved

2.100 Confidentiality

2.101 Confidentiality

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

2.102 Protection and Destruction of Confidential Information

The State and Contractor will each use at least the same degree of care to prevent disclosing to third parties the Confidential Information of the other as it employs to avoid unauthorized disclosure, publication or dissemination of its own confidential information of like character, but in no event less than reasonable care. Neither Contractor nor the State will (i) make any use of the Confidential Information of the other except as contemplated by this Contract, (ii) acquire any right in or assert any

lien against the Confidential Information of the other, or (iii) if requested to do so, refuse for any reason to promptly return the other party's Confidential Information to the other party. Each party will limit disclosure of the other party's Confidential Information to employees and Subcontractors who must have access to fulfill the purposes of this Contract. Disclosure to, and use by, a Subcontractor is permissible where (A) use of a Subcontractor is authorized under this Contract, (B) the disclosure is necessary or otherwise naturally occurs in connection with work that is within the Subcontractor's scope of responsibility, and (C) Contractor obligates the Subcontractor in a written Contract to maintain the State's Confidential Information in confidence. At the State's request, any employee of Contractor and of any Subcontractor having access or continued access to the State's Confidential Information may be required to execute an acknowledgment that the employee has been advised of Contractor's and the Subcontractor's obligations to Contractor or Subcontractor, as the case may be, to protect the Confidential Information from unauthorized use or disclosure.

Promptly upon termination or cancellation of the Contract for any reason, each party must certify to the to the other that it has returned or destroyed all of the other party's Confidential Information except to the extent retained in a confidential manner by such party for its legal records and as otherwise provided by law..

2.103 Exclusions

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

2.104 No Implied Rights

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

2.105 Respective Obligations

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

2.110 Records and Inspections

2.111 Inspection of Work Performed

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

for the State's representatives who have executed non-disclosure agreements in a form mutually acceptable to Contractor and the State.

2.112 Examination of Records

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

During the Audit Period, Contractor may examine and copy any of the State's books, records, documents and papers pertinent to establishing the State's compliance with the Contract and with applicable laws and rules to the extent relevant to the receipt of the services or use of the licenses.

2.113 Retention of Records

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

2.114 Audit Resolution

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

2.115 Errors

If the audit demonstrates any undercharge or overcharge in the fees paid by the State (including any additional fees for use of licensed materials beyond the scope of the Contract), then the amount in error must be reflected as a credit or debit on the next invoice and in subsequent invoices until the amount is paid or refunded in full. However, a credit or debit may not be carried for more than four invoices. If a balance remains after four invoices, then the remaining amount will be due as a payment or refund within 45 days of the last quarterly invoice that the balance appeared on or termination of the contract, whichever is earlier.

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

2.120 Warranties

2.121 Representations

The Contractor represents to the State

a. It is capable in all respects of fulfilling and must fulfill all of its obligations under this Contract. The performance of all obligations under this Contract must be provided in a timely, professional, and

workman-like manner and must meet the performance and operational standards required under this Contract.

b. The Contract Appendices, Attachments and Exhibits identify the equipment and software and services necessary for the Deliverable(s) to perform and Services to operate in compliance with the Contract's requirements and other standards of performance.

c. It is the lawful owner or licensee of any Deliverable licensed or sold to the State by Contractor or developed by Contractor under this Contract, and Contractor has all of the rights necessary to convey to the State the ownership rights or licensed use, as applicable, of any and all Deliverables. None of the Deliverables provided by Contractor to the State under neither this Contract, nor their use by the State will infringe the patent, copyright, trade secret, or other proprietary rights of any third party.

d. If, under this Contract, Contractor procures any equipment, software or other Deliverable for the State (including equipment, software and other Deliverables manufactured, re-marketed or otherwise sold by Contractor under Contractor's name), then in addition to Contractor's other responsibilities with respect to the items in this Contract, Contractor must assign or otherwise transfer to the State or its designees, or afford the State the benefits of, any manufacturer's warranty for the Deliverable.

e. The contract signatory has the power and authority, including any necessary corporate authorizations, necessary to enter into this Contract, on behalf of Contractor.

f. It is qualified and registered to transact business in all locations where required.

g. Neither the Contractor nor any Affiliates, nor any employee of either, has, must have, or must acquire, any contractual, financial, business, or other interest, direct or indirect, that would conflict in any manner or degree with Contractor's performance of its duties and responsibilities to the State under this Contract or otherwise create an appearance of impropriety with respect to the award or performance of this Agreement. Contractor must notify the State about the nature of the conflict or appearance of impropriety within two days of learning about it.

h. Neither Contractor nor any Affiliates, nor any employee of either has accepted or must accept anything of value based on an understanding that the actions of the Contractor or Affiliates or employee on behalf of the State would be influenced. Contractor must not attempt to influence any State employee by the direct or indirect offer of anything of value.

i. Neither Contractor nor any Affiliates, nor any employee of either has paid or agreed to pay any person, other than bona fide employees and consultants working solely for Contractor or the Affiliate, any fee, commission, percentage, brokerage fee, gift, or any other consideration, contingent upon or resulting from the award or making of this Contract.

j. The prices proposed by Contractor were arrived at independently, without consultation, communication, or agreement with any other bidder for the purpose of restricting competition; the prices quoted were not knowingly disclosed by Contractor to any other bidder; and no attempt was made by Contractor to induce any other person to submit or not submit a proposal for the purpose of restricting competition.

k. All financial statements, reports, and other information furnished by Contractor to the State as part of its response to the RFP or otherwise in connection with the award of this Contract fairly and accurately represent the business, properties, financial condition, and results of operations of Contractor as of the respective dates, or for the respective periods, covered by the financial statements, reports, other information. Since the respective dates or periods covered by the financial statements, reports, or other information, there have been no material adverse changes in the business, properties, financial condition, or results of operations of Contractor.

l. To Contractor's knowledge, all written information furnished to the State by or for the Contractor in connection with this Contract, including its bid, is true, accurate, and complete, and contains no untrue statement of material fact or omits any material fact it knows or reasonably should have known is necessary to make the information not misleading

m. It is not in material default or breach of any other contract or agreement that it may have with the State or any of its departments, commissions, boards, or agencies. Contractor further represents and warrants that it has not been a party to any contract with the State or any of its departments that was terminated by the State or the department within the previous five years for the reason that Contractor failed to perform or otherwise breached an obligation of the contract.

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

2.122 Reserved

2.123 Warranty of Fitness for a Particular Purpose

WITHOUT LIMITING SECTION 2.121, 2.124, 2.125 or 2.126., CONTRACTOR MAKES NO REPRESENTATIONS OR WARRANTIES REGARDING THE SOFTWARE, THE SERVICES, THE DELIVERABLES, OR ANY OTHER MATTER UNDER THIS CONTRACT, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY

2.124 Warranty of Title

Reserved.

2.125 Equipment Warranty

Reserved

2.126 Equipment to be New –

Reserved

2.127 Prohibited Products –

Reserved.

2.128 Consequences for Breach

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

2.130 Insurance

2.131 Liability Insurance

The Contractor must provide proof of the minimum levels of insurance coverage as indicated below. All insurance coverage provided relative to this Contract/Purchase Order is PRIMARY and NON-CONTRIBUTING to any comparable liability insurance (including self-insurances) carried by the State.

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

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

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

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

☑ 1. Commercial General Liability with the following minimum coverage:

$2,000,000 General Aggregate Limit other than Products/Completed Operations
$2,000,000 Products/Completed Operations Aggregate Limit
$1,000,000 Personal & Advertising Injury Limit
$1,000,000 Each Occurrence Limit

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

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

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

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

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

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

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

☐ 5. Employee Fidelity, including Computer Crimes, insurance naming the State as a loss payee, providing coverage for direct loss to the State and any legal liability of the State arising out of or related to fraudulent or dishonest acts committed by the employees of Contractor or its Subcontractors, acting alone or in collusion with others, in a minimum amount of one million dollars ($1,000,000.00) with a maximum deductible of fifty thousand dollars ($50,000.00).

☑ 6. Umbrella or Excess Liability Insurance in a minimum amount of ten million dollars ($10,000,000.00), which must apply, at a minimum, to the insurance required in Subsection 1 (Commercial General Liability) above.

☑ 7. Professional Liability (Errors and Omissions) Insurance with the following minimum coverage: three million dollars ($3,000,000.00) each occurrence and three million dollars ($3,000,000.00) annual aggregate.

☐ 8. Fire and Personal Property Insurance covering against any loss or damage to the office space used by Contractor for any reason under this Contract, and the equipment, software and other contents of the office space, including without limitation, those contents used by Contractor to provide

the Services to the State, up to its replacement value, where the office space and its contents are under the care, custody and control of Contractor. The State must be endorsed on the policy as a loss payee as its interests appear.

2.132 Subcontractor Insurance Coverage

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

2.133 Certificates of Insurance and Other Requirements

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

The Contractor must maintain all required insurance coverage throughout the term of the Contract and any extensions and, in the case of claims-made Commercial General Liability policies, must secure tail coverage for at least three years following the expiration or termination for any reason of this Contract. The minimum limits of coverage specified above are not intended, and must not be construed; to limit or expand any liability or indemnity of Contractor under this Contract to any indemnified party or other persons. Contractor is responsible for all deductibles with regard to the insurance. If the Contractor fails to pay any premium for required insurance as specified in this Contract, or if any insurer cancels or significantly reduces any required insurance as specified in this Contract without the State's written consent, then the State may, after the State has given the Contractor at least 30 days written notice, pay the premium or procure similar insurance coverage from another company or companies. The State may deduct any part of the cost from any payment due the Contractor, or the Contractor must pay that cost upon demand by the State.

2.140 Indemnification

2.141 General Indemnification

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

2.142 Code Indemnification

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

2.143 Employee Indemnification

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

2.144 Patent/Copyright Infringement Indemnification

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

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

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

2.145 Continuation of Indemnification Obligations

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

2.146 Indemnification Procedures

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

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

a. After the State receives notice of the action or proceeding involving a claim for which it will seek indemnification, the State must promptly notify Contractor of the claim in writing and take or assist Contractor in taking, as the case may be, any reasonable action to avoid the imposition of a default judgment against Contractor. No failure to notify the Contractor relieves the Contractor of its indemnification obligations except to the extent that the Contractor can prove damages attributable to the failure. Within 10 days following receipt of written notice from the State relating to any claim, the Contractor must notify the State in writing whether Contractor agrees to assume control of the defense and settlement of that claim (a "Notice of Election"). After notifying Contractor of a claim and before the State receiving Contractor's Notice of Election, the State is entitled to defend against the claim, at the Contractor's expense, and the Contractor will be responsible for any reasonable costs incurred by the State in defending against the claim during that period.
b. If Contractor delivers a Notice of Election relating to any claim: (i) the State is entitled to participate in the defense of the claim and to employ counsel at its own expense to assist in the handling of the claim and to monitor and advise the State about the status and progress of the defense; (ii) the

Contractor must, at the request of the State, demonstrate to the reasonable satisfaction of the State, the Contractor's financial ability to carry out its defense and indemnity obligations under this Contract; (iii) the Contractor must periodically advise the State about the status and progress of the defense and must obtain the prior written approval of the State before entering into any settlement of the claim or ceasing to defend against the claim and (iv) to the extent that any principles of Michigan governmental or public law may be involved or challenged, the State has the right, at its own expense, to control the defense of that portion of the claim involving the principles of Michigan governmental or public law. But the State may retain control of the defense and settlement of a claim by notifying the Contractor in writing within 10 days after the State's receipt of Contractor's information requested by the State under clause (ii) of this paragraph if the State determines that the Contractor has failed to demonstrate to the reasonable satisfaction of the State the Contractor's financial ability to carry out its defense and indemnity obligations under this Section. Any litigation activity on behalf of the State, or any of its subdivisions under this Section, must be coordinated with the Department of Attorney General. In the event the insurer's attorney represents the State under this Section, the insurer's attorney may be required to be designated as a Special Assistant Attorney General by the Attorney General of the State of Michigan.

c. If Contractor does not deliver a Notice of Election relating to any claim of which it is notified by the State as provided above, the State may defend the claim in the manner as it may deem appropriate, at the cost and expense of Contractor. If it is determined that the claim was one against which Contractor was required to indemnify the State, upon request of the State, Contractor must promptly reimburse the State for all the reasonable costs and expenses.

2.150 Termination/Cancellation

2.151 Notice and Right to Cure

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

2.152 Termination for Cause

a. The State may terminate this contract, for cause, by notifying the Contractor in writing, if the Contractor (i) breaches any of its material duties or obligations under this Contract (including a Chronic Failure to meet any particular SLA (if any)), and (ii) fails to cure such breach within the time period specified in the written notice of breach provided by the State
b. If this Contract is terminated for cause, the Contractor must pay all costs incurred by the State in terminating this Contract, including but not limited to, reasonable attorneys' fees. (rewrote)
c. If the State chooses to partially terminate this Contract for cause, charges payable under this Contract will be equitably adjusted to reflect those Services/Deliverables that are terminated and the State must pay for all Services/Deliverables performed and/or delivered through the termination date. Services and related provisions of this Contract that are terminated for cause must cease on the effective date of the termination.
d. If the State terminates this Contract for cause under this Section, and it is determined, for any reason, that Contractor was not in breach of contract under the provisions of this section, that termination for cause must be deemed to have been a termination for convenience, effective as of the same date, and the rights and obligations of the parties must be limited to that otherwise provided in this Contract for a termination for convenience.

2.153 Termination for Convenience

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

2.154 Termination for Non-Appropriation

(a) Contractor acknowledges that, if this Contract extends for several fiscal years, continuation of this Contract is subject to appropriation or availability of funds for this Contract. If funds to enable the State to effect continued payment under this Contract are not appropriated or otherwise made available, the State must terminate this Contract and all affected Statements of Work, in whole or in part, at the end of the last period for which funds have been appropriated or otherwise made available by giving written notice of termination to Contractor. The State must give Contractor at least 30 days advance written notice of termination for non-appropriation or unavailability (or the time as is available if the State receives notice of the final decision less than 30 days before the funding cutoff).

(b) If funding for the Contract is reduced by law, or funds to pay Contractor for the agreed-to level of the Services or production of Deliverables to be provided by Contractor are not appropriated or otherwise unavailable, the State may, upon 30 days written notice to Contractor, reduce the level of the Services or the change the production of Deliverables in the manner and for the periods of time as the State may elect. The charges payable under this Contract will be equitably adjusted to reflect any equipment, services or commodities not provided by reason of the reduction.

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

2.155 Termination for Criminal Conviction

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

2.156 Termination for Approvals Rescinded

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

2.157 Rights and Obligations upon Termination

1. If the State terminates this Contract for any reason, the Contractor must (a) stop all work as specified in the notice of termination as of the effective date of termination, (b) take any action that may be necessary, or that the State may direct, for preservation and protection of Deliverables or other property derived or resulting from this Contract that may be in Contractor's possession, (c)

return all materials and property provided directly or indirectly to Contractor by any entity, agent or employee of the State, (d) fulfill applicable obligations with respect to source code escrow, and (e) take any action to mitigate and limit any potential damages, or requests for Contractor adjustment or termination settlement costs, to the maximum practical extent, including terminating or limiting as otherwise applicable those subcontracts and outstanding orders for material and supplies resulting from the terminated Contract.

2. If the State terminates this Contract before its expiration for its own convenience, the State must pay Contractor for all charges due for Services and Deliverables provided before the date of termination and, if applicable, as a separate item of payment under this Contract, for Work In Process, on a percentage of completion basis at the level of completion determined by the State. Regardless of the basis for the termination, the State is not obligated to pay, or otherwise compensate, Contractor for any lost expected future profits, costs or expenses incurred with respect to Services not actually performed for the State.
3. Upon a good faith termination and release of the source code escrow in accordance with this Contract, (a) the Contractor's will not interfere with the State's attempt to assume, at its option, any subcontracts and agreements for services and deliverables provided under this Contract and (b) may further pursue completion of the Services/Deliverables under this Contract by replacement contract or otherwise as the State may in its sole judgment deem expedient.

2.158 Reservation of Rights

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

2.160 Termination by Contractor

2.161 Termination by Contractor

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

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

2.170 Transition Responsibilities

2.171 Contractor Transition Responsibilities

If the State terminates this Contract, for convenience or cause, or if the Contract is otherwise dissolved, voided, rescinded, nullified, expires or rendered unenforceable, the Contractor agrees to comply with direction provided by the State provided that the State shall pay reasonable fees for any Deliverables delivered and/or any Service performed in connection with such transition. If this Contract expires or terminates, the Contractor agrees to make all reasonable efforts to effect an orderly transition of services within a reasonable period of time that in no event will exceed **90** days. These efforts must include, but are not limited to, those listed in **Sections 2.141, 2.142, 2.143, 2.144, and 2.145.**

2.172 Contractor Personnel Transition

In the event this Contract terminates or expires, the Contractor shall work with the State, or a specified third party, to develop a transition plan setting forth the specific tasks and schedule to be accomplished

by the parties, to effect an orderly transition. The Contractor must allow as many personnel as reasonable based on the services then being purchased by the State from Contractor to remain on the job to help the State, or a specified third party, maintain the continuity and consistency of the services required by this Contract. In addition, during or following the transition period, in the event the State requires the Services of the Contractor's subcontractors or vendors, as necessary to meet its needs, Contractor agrees to reasonably, and with good-faith, work with the State to use the Services of Contractor's subcontractors or vendors, provided that the State shall pay reasonable fees for any Deliverables delivered and/or any Service performed in connection with such transition. Contractor will notify all of Contractor's subcontractors of procedures to be followed during transition.
2.173

2.174 Transition Payments

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

2.175 State Responsibilities

Reserved.

2.176 State Transition Responsibilities

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

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

2.180 Stop Work

2.181 Stop Work Orders

The State may, at any time, by written stop work order to Contractor, require that Contractor stop all, or any part, of the work called for by the Contract for a period of up to 90 calendar days after the stop work order is delivered to Contractor, and for any further period to which the parties may agree. The stop work order must be identified as a stop work order and must indicate that it is issued under this ***Section 2.150****. Upon receipt of the stop work order, Contractor must immediately comply with its terms and take all reasonable steps to minimize incurring costs allocable to the work covered by the stop work order during the period of work stoppage. Within the period of the stop work order, the State must either: (a) cancel the stop work order; or (b) terminate the work covered by the stop work order as provided in* ***Section 2.130****.*

2.182 Cancellation or Expiration of Stop Work Order

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

2.183 Allowance of Contractor Costs

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

2.190 Dispute Resolution

2.191 In General

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

2.192 Informal Dispute Resolution

1. All disputes between the parties must be resolved under the Contract Management procedures in this Contract. If the parties are unable to resolve any disputes after compliance with the processes, the parties must meet with the Director of Purchasing Operations, DMB, or designee, for the purpose of attempting to resolve the dispute without the need for formal legal proceedings, as follows:
   a. The representatives of Contractor and the State must meet as often as the parties reasonably deem necessary to gather and furnish to each other all information with respect to the matter in issue which the parties believe to be appropriate and germane in connection with its resolution. The representatives must discuss the problem and negotiate in good faith in an effort to resolve the dispute without the necessity of any formal proceeding. Such efforts shall be deemed complete after 90 days.
   b. During the course of negotiations, all reasonable requests made by one party to another for non-privileged information reasonably related to the Contract will be honored in order that each of the parties may be fully advised of the other's position.
   c. The specific format for the discussions will be left to the discretion of the designated State and Contractor representatives, but may include the preparation of agreed upon statements of fact or written statements of position.
   d. Following the completion of this process within 60 calendar days, the Director of Purchasing Operations, DMB, or designee, must issue a written opinion regarding the issue(s) in dispute within 30 calendar days. The opinion regarding the dispute must be considered the State's final action and the exhaustion of administrative remedies.
2. This Section will not be construed to prevent either party from instituting, and a party is authorized to institute, formal proceedings earlier, including, to avoid the expiration of any applicable limitations period, to preserve a superior position with respect to other creditors, or under Section 2.193.
3. The State will not mediate disputes between the Contractor and any other entity, except state agencies, concerning responsibility for performance of work under the Contract.

2.193 Injunctive Relief

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

2.194 Continued Performance

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

2.200 Federal and State Contract Requirements

2.201 Nondiscrimination

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

2.202 Unfair Labor Practices

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

2.203 Workplace Safety and Discriminatory Harassment

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

2.204 Prevailing Wage

Reserved

2.210 Governing Law

2.211 Governing Law

The Contract must in all respects be governed by, and construed according to, the substantive laws of the State of Michigan without regard to any Michigan choice of law rules that would apply the

substantive law of any other jurisdiction to the extent not inconsistent with, or pre-empted by federal law.

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

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

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

2.212 Compliance with Laws

Contractor shall comply with state, federal and local laws and ordinances applicable to it in the performance of its obligations hereunder.

2.213 Jurisdiction

Any dispute arising from the Contract must be resolved in the State of Michigan. With respect to any claim between the parties, Contractor consents to venue in Ingham County, Michigan, and irrevocably waives any objections it may have to the jurisdiction on the grounds of lack of personal jurisdiction of the court or the laying of venue of the court or on the basis of *forum non conveniens* or otherwise. Contractor agrees to appoint agents in the State of Michigan to receive service of process.

2.220 Limitation of Liability

2.221 Limitation of Liability

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

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

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

2.230 Disclosure Responsibilities

2.231 Disclosure of Litigation

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

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

1. the ability of Contractor (or a Subcontractor) to continue to perform this Contract according to its terms and conditions, or
2. whether Contractor (or a Subcontractor) in performing Services for the State is engaged in conduct which is similar in nature to conduct alleged in the Proceeding, which conduct would constitute a breach of this Contract or a violation of Michigan law, regulations or public policy, then the Contractor must provide the State all reasonable assurances requested by the State to demonstrate that:
    a. Contractor and its Subcontractors will be able to continue to perform this Contract and any Statements of Work according to its terms and conditions, and
    b. Contractor and its Subcontractors have not and will not engage in conduct in performing the Services which is similar in nature to the conduct alleged in the Proceeding.
3. Contractor must make the following notifications in writing:
    a. Within 30 days of Contractor becoming aware that a change in its ownership or officers has occurred, Contractor must notify DMB Purchasing Operations.

2.232 Reserved

2.233 Bankruptcy

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

1. the Contractor files for protection under the bankruptcy laws;
2. an involuntary petition is filed against the Contractor and not removed within 60 days;
3. the Contractor becomes insolvent or if a receiver is appointed due to the Contractor's insolvency;
4. the Contractor makes a general assignment for the benefit of creditors; or
5. the Contractor or its affiliates are unable to provide reasonable assurances that the Contractor or its affiliates can deliver the services under this Contract.

2.240 Performance

2.241 Time of Performance

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

2.242 Service Level Agreement (SLA)

1. SLAs will be completed with the following operational considerations:
   a. SLAs will not be calculated for individual Incidents where any event of Excusable Failure has been determined; Incident means any interruption in Services.
   b. SLAs will not be calculated for individual Incidents where loss of service is planned and where the State has received prior notification or coordination.
   c. SLAs will not apply if the applicable Incident could have been prevented through planning proposed by Contractor and not implemented at the request of the State. To invoke this consideration, complete documentation relevant to the denied planning proposal must be presented to substantiate the proposal.
   d. Time period measurements will be based on the time Incidents are received by the Contractor and the time that the State receives notification of resolution based on 24x7x365 time period, except that the time period measurement will be suspended based on the following:
      i. Time period(s) will not apply where Contractor does not have access to a physical State Location and where access to the State Location is necessary for problem identification and resolution.
      ii. Time period(s) will not apply where Contractor needs to obtain timely and accurate information or appropriate feedback and is unable to obtain timely and accurate information or appropriate feedback from the State.
2. Chronic Failure for any Service(s) will be defined as more than three failures to respond to any Business Critical outages within the specified time periods over a rolling 30 day period. Such failure shall be deemed a material breach.
3. Root Cause Analysis will be performed on any Business Critical outage(s) or outage(s) on Services when requested by the Contract Administrator. Contractor will provide its analysis within two weeks of outage(s) and provide a recommendation for resolution.
4. All decimals must be rounded to two decimal places with five and greater rounding up and four and less rounding down unless otherwise specified.

2.243 Liquidated Damages Reserved

2.244 Excusable Failure

Neither party will be liable for any default, damage or delay in the performance of its obligations under the Contract to the extent the default, damage or delay is caused by government regulations or requirements (executive, legislative, judicial, military or otherwise), power failure, electrical surges or current fluctuations, lightning, earthquake, war, water or other forces of nature or acts of God, delays or failures of transportation, equipment shortages, suppliers' failures, or acts or omissions of common carriers, fire; riots, civil disorders; strikes or other labor disputes, embargoes; injunctions (provided the injunction was not issued as a result of any fault or negligence of the party seeking to have its default or

delay excused); or any other cause beyond the reasonable control of a party; provided the non-performing party and its Subcontractors are without fault in causing the default or delay, and the default or delay could not have been prevented by reasonable precautions and cannot reasonably be circumvented by the non-performing party through the use of alternate sources, workaround plans or other means, including disaster recovery plans.

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

If any of the above-enumerated circumstances substantially prevent, hinder, or delay the Contractor's performance of the Services/provision of Deliverables for more than 30 days, and the State determines that performance is not likely to be resumed within a period of time that is satisfactory to the State in its reasonable discretion, then at the State's option: (a) the State may procure the affected Services/Deliverables from an alternate source, and the State is not be liable for payment for the unperformed Services/ Deliverables not provided under the Contract for so long as the delay in performance continues; (b) the State may upon prior written notice terminate any portion of the Contract so affected and the charges payable will be equitably adjusted to reflect those Services/Deliverables terminated and not performed or provided; or (c) the State may upon prior written notice terminate the affected Statement of Work without liability to Contractor as of a date specified by the State in a written notice of termination to the Contractor, except to the extent that the State must pay for Services/Deliverables performed or provided through the date of termination.

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

2.250 Approval of Deliverables

2.251 Delivery of Deliverables

A list of the Deliverables to be prepared and delivered by Contractor including, for each Deliverable, the scheduled delivery date and a designation of whether the Deliverable is a document ("Written Deliverable") or a Custom Software Deliverable is attached, if applicable. All Deliverables shall be completed and delivered for State review and written approval and, where applicable, installed in accordance with applicable terms and conditions of this Contract.

Prior to delivering any Deliverable to the State, Contractor will first perform all required quality assurance activities to verify that the Deliverable is complete and in conformance with its specifications. Before delivering a Deliverable to the State, Contractor shall certify to the State that (1) perform such quality assurance activities, (2) perform any applicable testing, and (3) correct all material deficiencies discovered during such quality assurance activities and testing, (4) the Deliverable is in a suitable state of readiness for the State's review and approval, and (5) the Deliverable/Service has all Critical Security patches/updates applied.

2.252 Contractor System Testing

Contractor will be responsible for System Testing and any regression testing (as needed) of each Software Deliverable in Contractor's development environment in accordance with its own procedures prior to turning over the Software Deliverable to the State for review.

2.253 Approval of Deliverables, In General

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

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

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

The State will approve in writing a Deliverable upon confirming that it conforms to and, as applicable, performs in accordance with, its specifications in all material respects. The State may, but shall not be required to, conditionally approve in writing a Deliverable that contains material deficiencies if the State elects to permit Contractor to rectify them post-approval. In any case, Contractor will be responsible for working diligently to correct within a reasonable time at Contractor's expense all deficiencies in the Deliverable that remain outstanding at the time of State approval.

If, after three (3) opportunities (the original and two repeat efforts), Contractor is unable to correct all deficiencies preventing State approval of a Deliverable, the State may: (i) demand that Contractor cure the failure and give Contractor additional time to cure the failure at the sole expense of Contractor; or (ii) terminate this Contract for default, either in whole or in part by notice to Contractor (and without the need to afford Contractor any further opportunity to cure). Notwithstanding the foregoing, the State shall not use, as a basis for exercising its termination rights under this Section, deficiencies discovered in a repeat State Review Period that could reasonably have been discovered during a prior State Review Period.

The State, at any time and in its own discretion, may halt the approval process if such process reveals deficiencies in or problems with a Deliverable in a sufficient quantity or of a sufficient severity as to make the continuation of such process unproductive or unworkable. In such case, the State may return the applicable Deliverable to Contractor for correction and re-delivery prior to resuming the review and, in that event, Contractor will correct the deficiencies in such Deliverable in accordance with the Contract, as the case may be.

Approval in writing of a Deliverable by the State shall be provisional; that is, such approval shall not preclude the State from later identifying deficiencies in, and requiring maintenance services.

2.254 Process for Approval of Deliverables

The State Review Period for Written Deliverables will be the number of days set forth in the applicable Statement of Work following delivery of the final version of the Written Deliverable (failing which the State Review Period, by default, shall be eight (8) Business Days for Written Deliverables of one hundred (100) pages or less and eight (8) Business Days for Written Deliverables of more than one hundred (100) pages). The duration of the State Review Periods will be doubled if the State has not had an opportunity to review an interim draft of the Written Deliverable prior to its submission to the State. The State agrees to notify Contractor in writing by the end of the State Review Period either stating that the Written Deliverable is approved in the form delivered by Contractor or describing any

deficiencies that must be corrected prior to approval of the Written Deliverable (or at the State's election, subsequent to approval of the Written Deliverable). If the State delivers to Contractor a notice of deficiencies, Contractor will correct the described deficiencies and within five (5) Business Days resubmit the Deliverable in a form that shows all revisions made to the original version delivered to the State. Contractor's correction efforts will be made at no additional charge. Upon receipt of a corrected Written Deliverable from Contractor, the State will have a reasonable additional period of time, not to exceed the length of the original State Review Period, to review the corrected Written Deliverable to confirm that the identified deficiencies have been corrected.

Approval shall be granted if Deliverables conform to agreed specifications. To the extent the State fails to accept or reasonably reject a Deliverable within the eight (8) Business Day review period, Contractor's schedule shall be adjusted to reflect the impact of such delay on Contractor.

2.255 Reserved

2.256 Final Acceptance

For each applicable Acceptance Module, Contractor shall work with the State to verify the operation of such deliverables in accordance with the functionality detail contained herein. If such customizations fail to operate in accordance with the functionality detailed in the Documentation, State shall inform Contractor of the same in writing at the conclusion of such demonstration. Contractor shall then have thirty (30) days from the date of notice to modify or correct such Acceptance Module so that it operates in accordance in all material respects with the functionality detailed in the Documentation. If, after the second demonstration, such Acceptance Module does not operate in accordance in all material respects with the functionality detailed in the Documentation, then State shall allow Contractor an additional thirty (30) days to correct such Acceptance Module. .

2.260 Ownership

2.261 Ownership

The State acknowledges and agrees that: (i) Contractor or its licensor retains all right, title, and interest in the Licensed Software, the Deliverables, the Work Product, and all documentation related thereto, and all intellectual property rights therein, and (ii) Contractor is not the State's employee, and none of the foregoing materials are works made for hire. Contractor retains the exclusive right to reproduce, publish, sell, and license the Licensed Software, Deliverables, and all documentation and work product resulting from the performance of the Services. At no time during the term of the Contract or any time thereafter shall the State challenge the validity of Contractor's copyright in of ownership of Licensed Software, Deliverables, and all documentation and work product resulting from the performance of the Services.

2.262 Vesting of Rights

Reserved

2.263 Rights in Data

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

information. The Contractor must comply at all times with all laws and regulations applicable to the personally identifiable information.

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

2.264 Ownership of Materials

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

2.270 State Standards

2.271 Existing Technology Standards

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

2.272 Acceptable Use Policy

To the extent that Contractor has access to the State computer system, Contractor must comply with the State's Acceptable Use Policy, see http://www.michigan.gov/ditservice. All Contractor employees must be required, in writing, to agree to the State's Acceptable Use Policy before accessing the State system. The State reserves the right to terminate Contractor's access to the State system if a violation occurs; provided that the State acknowledges that Contractor's performance may be dependent on such access.

2.273 Systems Changes

Contractor is not responsible for and not authorized to make changes to any State systems without written authorization from the Project Manager. Any changes Contractor makes to State systems with the State's approval must be done according to applicable State procedures, including security, access and configuration management procedures. For the avoidance of doubt, Contractor will not be restricted in its development, enhancement or modification of the Licensed Software.

2.280 Extended Purchasing

2.281 MiDEAL (Michigan Delivery Extended Agreements Locally

Public Act 431 of 1984 permits DMB to provide purchasing services to any city, village, county, township, school district, intermediate school district, non-profit hospital, institution of higher education, community, or junior college. A current listing of approved program members is available at: www.michigan.gov/buymichiganfirst. Unless otherwise stated, the Contractor shall make reasonable efforts to determine that the non-state agency is an authorized purchaser before extending the Contract pricing.

Contractor agrees to supply the software developed hereunder, the interface license fees, and the hourly implementation rates for Services to these other local governmental agencies identified by the State at the same prices set forth in Statement of Work No. 1 for a period of twenty-four months following execution of this Contract, except that any fees for sublicensed software are excluded.

2.282 State Employee Purchases / RESERVED

2.290 Environmental Provision /RESERVED

2.300 Deliverables

2.301 Software

A list of the items of software the State is required to purchase for the IT environment/designated platform as described in attachments hereto. The list includes all software required to complete the Contract and make the Deliverables operable. The attachment also identifies certain items of software to be provided by the State. If any additional software that Contractor embeds in its COTS solution is required in order to use the Licensed Software, Contractor shall provide such embedded software at no additional charge.

2.302 Reserved

2.303 Reserved

2.304 Reserved

2.310 Software Warranties

2.311 Performance Warranty

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

2.312 No Surreptitious Code Warranty

The Contractor represents and warrants to the State during the Warranty Period and 90 days after any updates / releases or deliveries that, except as provided for in the documentation related to the Licensed Software and the Deliverables or any features necessary for the Contractor to deliver, support, and maintain or ensure the security of the Licensed Software and the Deliverables, no copy of licensed Software provided to the State knowingly contains or will knowingly contain any Self-Help Code or any Unauthorized Code as defined below; provided that, the Licensed Software may include a device that counts the number of concurrent users, or otherwise confirms compliance with the terms and conditions of this Agreement. This warranty is referred to in this Contract as the “No Surreptitious Code Warranty.”

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

As used in this Contract, “Unauthorized Code” means any virus, Trojan horse, spyware, worm or other Software routines or components designed to permit unauthorized access to disable, erase, or otherwise harm software, equipment, or data; or to perform any other such actions. The term Unauthorized Code does not include Self-Help Code. Unauthorized Code does not include Software routines in a computer program, if any, designed to permit an owner of the computer program (or other

person acting by authority of the owner) to obtain access to a State's computer system(s) (e.g. remote access via modem) for purposes of maintenance or technical support.

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

2.313 Calendar Warranty

The Contractor represents and warrants to the State during the Warranty Period that all software for which the Contractor either sells or licenses to the State of Michigan and used by the State prior to, during or after the calendar year 2000, includes or shall include, at no added cost to the State, design and performance so the State shall not experience software abnormality and/or the generation of incorrect results from the software, due to date oriented processing, in the operation of the business of the State of Michigan.

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

2.314 Third-party Software Warranty

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

2.315 Physical Media Warranty

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

2.320 Software Licensing

2.321 Licensed Software.

The State shall make no copies or duplicates of the Licensed Software, Sublicensed Software, Deliverables, Software Services or any component thereof, for any purpose whatsoever without the prior written consent of Contractor, except that the State may make copies of Licensed Software, Sublicensed Software, Deliverables, Software Services or any component thereof as reasonably necessary for back-up, testing, internal training and archival purposes only. Except as may be expressly authorized in this Contract, the State may not use any component of the Licensed Software, Sublicensed Software, or Software Services to provide services to third parties as a service bureau or data processor. Except as expressly provided in the Statement of Work/Appendix. The State may not allow any unlicensed third party to access the Licensed Software, and Software Services. the State shall not disassemble, decompile, or otherwise reverse engineer any component of the Licensed Software, Sublicensed Software, Deliverables, Software Services or any component thereof. The State

acknowledges and agrees that certain components of the Licensed Software and Sublicensed Software or third party software may be priced based on the number of Licensed Users identified in an SOW/Appendix, and that the State may only expand its use of the System to additional Licensed Users upon payment of additional License and Service Fees for the Licensed Software and Sublicensed Software (and, if applicable, third party software) at the then current rate. If the State expands its use of the Licensed Software and Sublicensed Software, additional License, Sublicense and Services fees will be immediately due and payable at Contractor's at the rate identified within this contract. Support Fees for such additional Licensed Software licenses and additional Sublicensed Software licenses shall be at the rate identified within this contract.

2.322 Cross-License, Deliverables and Derivative Work, License to Contractor

The Licensed Software is commercial computer software programs developed exclusively at private expense. The State will not alter or remove any copyright notice, trademark notice, legend, marking or other notice from any copies of the Licensed Software, Sublicensed Software, Documentation or other materials provided to the State by Contractor

2.323 License Back to the State

Unless otherwise specifically agreed to by the State, before initiating the preparation of any Deliverable that is a Derivative of a preexisting work, the Contractor shall cause the State to have and obtain the irrevocable, nonexclusive, worldwide, royalty-free right and license to (1) use, execute, reproduce, display, perform, distribute internally or externally, sell copies of, and prepare Derivative Works based upon all preexisting works and Derivative Works thereof, and (2) authorize or sublicense others from time to time to do any or all of the foregoing. The Contractor will deliver Derivative Works to the State under this Agreement only if mutually agreed in a separate writing by the State and the Contractor. Specifically, none of the Licensed Software, the COTS Package, the Customizations to the COTS Package or the Interfaces are Derivative Works.

2.324 License Retained by Contractor

Contractor grants to the State a non-exclusive, royalty-free, site-wide, irrevocable, transferable license to use the Licensed Software and related documentation according to the terms and conditions of this Contract. For the purposes of this license, “site-wide” includes any State of Michigan office regardless of its physical location.
The Licensed Software is clinical in nature and, therefore, the State may modify the Licensed Software and may combine such with other programs or materials to form a derivative work only upon the prior mutual written agreement of the State and the Contractor. If the parties make such an agreement, the State will own and hold all copyright, trademarks, patent and other intellectual property rights in any such derivative work created by the State, excluding any rights or interest in Licensed Software other than those granted in this Contract.

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

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

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

2.325 Pre-existing Materials for Custom Software Deliverables

Neither Contractor nor any of its Subcontractors shall incorporate any preexisting materials (including Standard Software) into Custom Software Deliverables or use any pre-existing materials to produce

Custom Software Deliverables if such pre-existing materials will be needed by the State in order to use the Custom Software Deliverables unless (i) such pre-existing materials and their owners are identified to the State in writing and (ii) such pre-existing materials are either readily commercially available products for which Contractor or its Subcontractor, as the case may be, has obtained a license (in form and substance approved by the State) in the name of the State, or are materials that Contractor or its Subcontractor, as the case may be, has the right to license to the State and has licensed to the State on terms and conditions approved by the State prior to using such pre-existing materials to perform the Services. The Contractor will deliver Custom Software Deliverables to the State under this Agreement only if mutually agreed in a separate writing by the State and the Contractor. Specifically, none of the Licensed Software, the COTS Package, the Customizations to the COTS Package or the Interfaces are Custom Software Deliverables.

2.330 Source Code Escrow

2.331 Definition

"Source Code Escrow Package" shall mean:

1. A complete copy in machine-readable form of the source code and executable code of the Licensed Software, including any updates or new releases of the product;
2. A complete copy of any existing design documentation and user documentation, including any updates or revisions; and/or
3. Complete instructions for compiling and linking every part of the source code into executable code for purposes of enabling verification of the completeness of the source code as provided below. Such instructions shall include precise identification of all compilers, library packages, and linkers used to generate executable code.

2.332 Delivery of Source Code into Escrow

Contractor shall deliver a Source Code Escrow Package to Contractor's standard Escrow Agent, pursuant to the Escrow Contract, which shall be entered into on commercially reasonable terms subject to the provisions of this Contract within (30) thirty days of the execution of this Contract.

2.333 Delivery of New Source Code into Escrow

If at anytime during the term of this Contract, the Contractor provides a maintenance release or upgrade version of the Licensed Software, Contractor shall within ten (10) days of the end of each calendared quarter, deposit with the Escrow Agent, in accordance with the Escrow Contract, a Source Code Escrow Package for the maintenance release or upgrade version, and provide the State with notice of the delivery.

2.334 Verification

The State reserves the right at any time, but not more than once a year, through the third party Escrow Agent, upon thirty (30) days written notice, to seek, at the State's expense, verification of the Source Code Escrow Package.

2.335 Escrow Fees

The Contractor will pay all fees and expenses charged by the Escrow Agent.

2.336 Release Events

The Source Code Escrow Package may be released from escrow to the State, temporarily or permanently, upon the occurrence of one or more of the following:

1. The Contractor becomes insolvent, makes a general assignment for the benefit of creditors, files a voluntary petition of bankruptcy, suffers or permits the appointment of a receiver for its business or assets, becomes subject to any proceeding under bankruptcy or insolvency law, whether domestic or foreign that is not dismissed within 90 days, and the State has reason to believe that

such events will cause the Contractor to fail to meet its warranties and maintenance obligations in the foreseeable future;

2. The Contractor has wound up or liquidated its business voluntarily or otherwise and the State has reason to believe that such events will cause the Contractor to fail to meet its warranties and maintenance obligations in the foreseeable future;

2.337 Release Event Procedures

If the State desires to obtain the Source Code Escrow Package from the Escrow Agent upon the occurrence of an Event in this **Section**, then:

1. The State shall comply with all procedures in the Escrow Contract;
2. The State shall maintain all materials and information comprising the Source Code Escrow Package in confidence in accordance with this Contract;
3. If the release is a temporary one, then the State shall promptly return all released materials to Contractor when the circumstances leading to the release are no longer in effect.

2.338 License

Upon release from the Escrow Agent pursuant to an event described in this **Section**, the Contractor automatically grants the State a non-exclusive, irrevocable license to use, reproduce, modify, maintain, support, update, have made, and create Derivative Works. Further, the State shall have the right to use the Source Code Escrow Package in order to maintain and support the Licensed Software so that it can be used by the State as set forth in this Contract.

2.339 Derivative Works

Any Derivative Works to the source code released from escrow that are made by or on behalf of the State shall be the sole property of the State. The State acknowledges that its ownership rights are limited solely to the Derivative Works and do not include any ownership rights in the COTS Package, the Licenses Software, the Customizations to the COTS package or the Interfaces.

APPENDIX A
Functional Specifications
MDCH Facility Pharmacy System

Contractor's proposed solution complies or does not comply with the functional requirements as follows:

- *Check the box that applies to each requirement in the columns labeled:* ***Yes, Yes with Modifications, or No.***

  - ***Yes*** *– is defined as the Contractor's solution complies with the requirement in all material respects and is currently an available feature.*

    In the ***comment box*** *the Contractor must describe how their proposed solution complies with the requirement. If applicable, screen shots may be provided to show this functionality and include as an Appendix.*

  - ***Yes with Modifications*** *– is defined as the solution does not currently comply with the requirement but the Contractor can modify the solution through configuration, programming or source code changes which, in the Contractor's opinion, would result in their solution reaching compliance in all material respects with a requirement.* Items marked Yes with modification are only in scope to the extent they are required or optional customizations specified in **Appendix E**.

    In the ***comment box*** *the Contractor must describe the modification that can be made and how it will comply with the requirement. All such modifications are considered to be part of the solution being proposed and included in the bid price.*

  - ***No*** *– is defined as the Contractor's proposed solution does not comply with the requirement in all material respects.*

    In the ***comment box*** *the Contractor must describe the impact of not meeting the requirement.*

- *Each requirement in the column labeled* ***Requirement Response (REQ Response)*** *is marked with a an* ***A, B, C, D or E*** *as defined below.*

  In the ***comment box*** *the Contractor must provide any additional information related to the solution.*

  - *currently provided as a standard feature*
  - *not currently provided but is a planned enhancement or will be added at no additional cost and will be supported in future releases*
  - *not currently provided but will be added at the additional cost detailed in the cost proposal and will require additional cost to transfer to future releases*
  - *not currently provided but will be added at the additional cost detailed in the cost proposal and will be supported in future releases at no additional cost*
  - *not supportable*

Item No.	Functional Requirements/Features	R= Required O=Optional	Yes	Yes with Modifications	No	Req Response (A,B,C,D, E)	Comments
1	**Admission Processing**						
	Admission Processing						
1-1	Medication Reconciliation	**R**	X			A	
1-2	· Ability to record and reconcile patient current medication	**R**	X			A	
1-3	· Document decision to continue/discontinue current med(s)	**R**	X			A	
1-4	Supports pre-admission of inpatients, with "flag" and "alert" for missing information required prior to medication order processing (e.g., allergies)	**O**	X			A	The Pharmacy module has a switch to prohibit order entry without allergy information.
1-5	Electronic signature	**O**	X			A	For sign on and user tracking.
2	**Medication Ordering**						
	Medication Ordering (Electronic Physician Order Entry)						
2-1	Real-time access to patient current medication and profile	**R**	X			A	
2-2	Ability to verify medication doses, route, etc.	**R**	X			A	Contractor's ClosedLoop solution provides seamless interaction between Clinician Order Entry and Pharmacy modules.
2-3	Ability to interface with drug therapy algorithm	**O**			X	E	This is not a requirement as the proposed system has the ability to perform standing order sets.
2-4	Access using a variety of means including terminal & hand held devices	**O**	X			A	Client accessible natively on a Windows PC or via a thin terminal using Citrix technology with Pharmacy. Medication Administration Record module can be accessed on Symbol and Dolphin devices using windows IE6 or IE7 browser.
2-5	Real-time check/verification of allergies or other contraindications	**R**	X			A	Seamless interaction with First DataBank Clinical module.
2-6	Electronic signature	**O**	X			A	
2-7	Immediate pharmacy review of order	**R**	X			A	Both automated by a switch or immediate queue to Pharmacy Batch Review.

2-8	Automated medication refill/renewal functionality	**R**	X			A	Both from a report functionality-either through Pharmacy module or work list of stop orders in Clinician Order Entry module.
2-9	Physician ordering by therapeutic category with alternate drug cost and therapeutic comparisons side-by-side	**O**		X		D	We have a non formulary substitution routine that can be set up to convert by therapeutic class.
	Order Creation (Electronic Physician Ordering Entry)						
2-10	Clearly displays unique patient demographics and values on the screen, including but not limited to:		X			A	Through Clinician Order Entry Module.
2-11	· Patient name	**R**	X			A	Through Clinician Order Entry Module.
2-12	· Hospital inpatient identification number / unique identifier	**R**	X			A	Through Clinician Order Entry Module.
2-13	· Location (e.g. Nurse station room / bed)	**R**	X			A	Through Clinician Order Entry Module.
2-14	· Admission date	**R**	X			A	Through Clinician Order Entry Module.
2-15	· Discharge date	**O**	X			A	Through Clinician Order Entry Module.
2-16	· Social Security Number (SSN)	**O**		X		D	Can be masked and displayed.
2-17	· Date of Birth (DOB)	**R**	X			A	Through Clinician Order Entry Module.
2-18	· Address	**O**	X			A	Through Clinician Order Entry Module.
2-19	· Phone number	**O**	X			A	Through Clinician Order Entry Module.
2-20	· Previous state hospital admission and discharge dates	**O**	X			A	Our Clinician Order Entry Module can display previous visits from the facility that the customer is currently in.
2-21	· Insurance/Third Party Payer information	**R**		X		D	Can be added.
2-22	· Height	**R**	X			A	Through Clinician Order Entry Module.
2-23	· Weight	**R**	X			A	Through Clinician Order Entry Module.
2-24	· Body surface area	**O**	X			A	Through Clinician Order Entry Module.
2-25	· Medical conditions (based on ICD9/10 codes)	**O**	X			A	Through Clinician Order Entry Module.
2-26	· Renal function (CrCl -Creatinine Clearance)	**R**	X			A	Through Clinician Order Entry Module.
2-27	· Allergies / Adverse Drug Reactions (ADRs)	**R**	X			A	Through Clinician Order Entry Module.
2-28	· Race	**R**	X			A	
2-29	· Ethnicity	**O**		X		D	Can be added.
2-30	· Patient Pregnant (Y/N)	**R**	X			A	Through Clinician Order Entry Module.
2-31	Supports various order types & parameters, including:		X			A	Through Clinician Order Entry Module.
2-32	· Scheduled medication - given periodically (e.g., every 6 hrs, M-W-F);	**R**	X			A	Through Clinician Order Entry Module.
2-33	· Continuous medication - medication or fluid that is given on a continuing basis (e.g., 125 ml/hr, nebulized medications);	**R**	X			A	Through Clinician Order Entry Module.

2-34	· Variable or "PRN" dose medication - dispensed on an as needed basis;	**R**	X			A	Through Clinician Order Entry Module.
2-35	· Automatic stop order (e.g., has expiration or stop date)	**R**	X			A	Through Clinician Order Entry Module.

2-36	· Combinations of the above order types;	**O**	X			A	Through Clinician Order Entry Module.
2-37	· Supports the use of multiple dosage units for medications, (e.g., grams, milligrams, or micrograms, mg/ml, units).	**R**	X			A	Through Clinician Order Entry Module.
2-38	· The practitioner can specify whether a dose is needed today for a new daily dose order	**R**	X			A	Through Clinician Order Entry Module.
2-39	Provides the capability to create and maintain order data, including:						
2-40	· Prescriber identifier	**R**	X			A	Feature of Clinician Order Entry Module.
2-41	· Unit / location field;	**R**	X			A	Feature of Clinician Order Entry Module.
2-42	· Facility Identifier and name;	**R**	X			A	Feature of Clinician Order Entry Module.
2-43	· Order identifier;	**R**	X			A	Feature of Clinician Order Entry Module.
2-44	· Order creation Date;	**R**	X			A	Feature of Clinician Order Entry Module.
2-45	· Item code - type of pharmacological product prescribed (e.g., AHFS - American Hospital Formulary Service), compound, etc.,	**O**	X			A	Feature of Clinician Order Entry Module.
2-46	· Quantity prescribed, units, volume, or weight	**R**	X			A	
2-47	· Dosage and dosage form (e.g., tablets, capsules, liquid);	**R**	X			A	Feature of Clinician Order Entry Module.
2-48	· Route of administration codes (e.g., AP – apply externally; PO – oral medication; IH - inhalation; IJ – injection);	**R**	X			A	Feature of Clinician Order Entry Module.
2-49	· Generic substitution allowed/not allowed e.g. DAW [dispense as written] codes	**O**	X			A	Through IPOLA
2-50	· Days supply prescribed (i.e., the number of days that the prescribed item is expected to last);	**R**	X			A	Through IPOLA
2-51	· Authorized number of refills;	**O**	X			A	Through IPOLA
2-52	· Dispensing interval, (notes the minimum period of time between dispensing a specified quantity, if refills are authorized);	**O**		X		D	Can be added.
2-53	· Interval duration code, (defines the unit of measure for describing the dispensing interval number e.g., “days”);	**R**		X		D	Can be added.
2-54	· First fill effective date;	**R**	X			A	Through IPOLA
2-55	· Refill expiration date;	**O**	X			A	Through IPOLA
2-56	· Expected administration start date;	**R**	X			A	Through Clinician Order Entry Module.
2-57	· Expected administration end date;	**R**	X			A	Through Clinician Order Entry Module.

2-58	· Justification area- e.g., for controlled drugs as applicable;	**R**	X			A	Through Clinician Order Entry Module.
2-59	· Continuous use order code (e.g., continuous vs. short term, STAT, NOW)	**R**	X			A	Feature of Clinician Order Entry Module.
2-60	· Order received code (e.g., telephone order; verbal order);	**R**	X			A	Through Clinician Order Entry Module.
2-61	· Status code (e.g., filled vs. Suspended vs. cancelled; on hold; order modified or unfilled, etc.)	**R**	X			A	Through Clinician Order Entry Module.
2-62	· Indication code - ICD9/10 code indicating why the order is being created.	**O**		X		D	ICD 10 is planned for a future release.
2-63	· "Special Instructions" field or Patient instructions - a free form textual information explaining how the prescribed product is to be taken;	**R**	X			A	Through Clinician Order Entry Module.
2-64	· Area for provider instructions (e.g., instructions to nurse administering the medication).	**R**	X			A	Through Clinician Order Entry Module.
2-65	Easily and readily identifies stop orders both on-screen and on the medication administration record.	**R**	X			A	Through Clinician Order Entry Module.
2-66	· Allows pharmacy customizable stop order policies, by drug or class and flags orders not entered completely either with a 'soft stop' or by inserting pharmacy defined stop order date.	**R**	X			A	Through Clinician Order Entry Module. ASO for Area and/or Drug Master, Drug Master overrides Area.
2-67	· Provides a report for stop orders.	**R**	X			A	Through Clinician Order Entry Module.
2-68	Supports ability for an authorized user to over-ride a stop order.	**R**	X			A	Through Clinician Order Entry Module.
2-69	Prior to order entry, provides the capability to enter and to access information, including, but not limited to:						
2-70	·patient demographic profile;	**R**	X			A	Through Clinician Order Entry Module.
2-71	·patient allergy and drug Profile;	**R**	X			A	Through Clinician Order Entry Module.
2-72	·patient Medical Condition/History	**R**	X			A	Through Clinician Order Entry Module.
2-73	·patient Financial and Billing Profile	**O**	X			A	Through Clinician Order Entry Module.
2-74	Diagnosis	**R**	X			A	Through Clinician Order Entry Module.
2-75	Supports rapid entry of routine orders. (Pharmacist vs. Non-Pharmacist) entry of drug and non-drug orders.	**R**	X			A	Through Clinician Order Entry Module.
2-76	Provides functionality for the creation of order sets customizable by Pharmacy	**R**	X			A	Through Clinician Order Entry Module.

2-77	Allows entry to note transferring physician in order (pt transfer to another unit).	**O**	X			A	Through Clinician Order Entry Module.
2-78	If non-formulary drug selected, provide a non-formulary Drug Request form for physician to complete (printed form would include Patient name, Location, Drug name, strength, admin times, etc.).	**O**		X		D	Can be added.
2-79	Supports the tracking of non-formulary drugs and flags as non-formulary in a patient profile.	**O**	X			A	Through Clinician Order Entry Module.
2-80	Supports pharmacy defined therapeutic interchange where applicable and an appropriate authority and audit trail.	**O**	X			A	Through Clinician Order Entry Module.
2-81	Supports medication order entry by trade or generic name.	**R**	X			A	Through Clinician Order Entry Module.
2-82	Provides functionality for tapered orders.	**R**		X		D	Can be added.
2-83	Prevents order from being completed without a route of administration or other medication order pertinents.	**R**	X			A	Through Clinician Order Entry Module.
2-84	Tracks and holds pending drug therapy problems, (e.g., holding queue) with ability to notify relevant parties (e.g., nurse, physician)	**O**		X		D	Can Be added.
2-85	Checks for drug/drug interactions on order entry with functionality to classify and flag according to selected severity.	**R**	X			A	Through Clinician Order Entry Module.
2-86	Checks for drug/disease (or Diagnosis) interactions on order entry	**R**	X			A	Through Clinician Order Entry Module.
2-87	Checks for drug/food interactions on order entry	**O**	X			A	Through Clinician Order Entry Module.
2-88	Checks for medication allergies and other kinds of ADRs (Adverse Drug Reactions) that prohibit re-challenge of the drug on order entry.	**R**	X			A	Through Clinician Order Entry Module.
2-89	Checks the dosage range for drugs on order entry by age, weight and/or sex.	**R**	X			A	Through Clinician Order Entry Module.
2-90	Checks dosage ranges against renal function (e.g., CrCl)	**O**	X			A	Through Clinician Order Entry Module.
2-91	Provides therapeutic duplicate checking on order entry.	**R**	X			A	Through Clinician Order Entry Module.
2-92	Provides current and up-to-date drug reference information on order entry. (Please name the source of the reference information and how frequently the information is updated).	**R**	X			A	Through Clinician Order Entry Module.
2-93	Provides on-line access to drug interaction information to alert care providers about possible interactions between drugs.	**R**	X			A	Through Clinician Order Entry Module.

2-94	Provides the capability to calculate doses	**O**	X			A	Through Clinician Order Entry Module.
2-95	Provides the capability to 'copy' orders to speed up order entry (e.g., for repeat information)	**O**	X			A	Through Clinician Order Entry Module.
2-96	Allows entering order to start at a future date	**R**	X			A	Through Clinician Order Entry Module.
2-97	Ability for any authorized user to view entire or active medication orders.	**R**	X			A	Through Clinician Order Entry Module.
2-98	Flags inactive orders.	**R**	X			A	Through Clinician Order Entry Module.
2-99	Allows for drug/drug screening without complete order entry, (independent of patient profile), to screen "potential" drugs against the current profile for interactions, duplications, etc. without entering a finalized drug order.	**O**		X		D	Can be added.
2-100	Provides current information for patient education & counseling.	**O**	X			A	Info Button: English and Spanish
2-101	Prints drug monographs to give to patients:		X			A	Info Button: English and Spanish
2-102	· Monographs meet Federal Regulation of sixth grade reading level.	**R**	X			A	Info Button: English and Spanish
2-103	· Monographs: Multi-lingual, (capable of printing in different languages, [e.g., Spanish, Chinese])	**O**	X			A	Info Button: English and Spanish
2-104	Discharge medications: functionality to print customized pharmacy prescription labels.	**R**	X			A	This is a function within the Pharmacy Module.
2-105	Generates a current list of medications, dosage times and administration schedule (medication profile/medication renewal for unit transfer)	**R**	X			A	Through Clinician Order Entry Module.
2-106	Provides functionality for fully documented medication reordering process with reason codes (or reorder "code" system)	**R**		X		D	Can be added.
2-107	Supports ability to perform a price calculation during drug inquiry. (Drug look up and price)	**O**	X			A	
2-108	Ability to identify high risk drugs, look alike-sound alike drugs with alerts on order entry	**R**	X			A	Requires customer formulary to be set up with Tallman Lettering, look alike-sound alike requires configuration of an alert by drug.
2-109	Ability to maintain historical transaction data record that meets latest National Council for Prescription Drug Plans (NCPDP) record standards (data elements).	**R**	X			A	Through Clinician Order Entry Module.

2-110	Supports customized order entry by “sig code”, free text, or combination of both.	**R**	X			A	Through Clinician Order Entry Module.
2-111	Supports ability for “batch” processing for re-labeling, refilling or renewing medication orders / prescriptions (e.g., transfers, etc.)	**R**	X			A	Through Clinician Order Entry Module.
	Order Transmission / Receivables						
2-112	Provides the capability / interface to receive, maintain, export and store orders / prescriptions sent by external systems (e.g., Order Entry System) and associates these orders in the patient record	**O**	X			A	Through Clinician Order Entry Module.
2-113	Provides the capability or functionality to digitize paper-based orders / prescriptions using a scanner and stores this information in the pharmacy system or other interfacing system	**O**			X	E	Although not included as part of the system, there are several partner companies that work with our system to provide this capability.
	Order Verification / Validation						
2-114	Provides the capability to verify order for completeness prior to completion including but not limited to verifying:						
2-115	· patient demographics	**R**	X			A	Through Clinician Order Entry Module.
2-116	· brand and / or generic drug name,	**R**	X			A	Through Clinician Order Entry Module.
2-117	· drug administration parameters / directions	**R**	X			A	Through Clinician Order Entry Module.
2-118	· dosage,	**R**	X			A	Through Clinician Order Entry Module.
2-119	· route of administration	**R**	X			A	Through Clinician Order Entry Module.
2-120	· quantity	**R**	X			A	Through Clinician Order Entry Module.
2-121	· package size,	**R**	X			A	Through Clinician Order Entry Module.
2-122	· price	**R**	X			A	Through Clinician Order Entry Module.
2-123	Provides the capability to verify orders for clinical appropriateness, including but not limited to checking for:						
2-124	· Intended purpose: Drug orders against an ICD-9/10 diagnosis code	**O**		X		D	Can be accommodated using DIF Clinical Module.
2-125	· Renal function, liver function	**O**	X			A	Through Clinician Order Entry Module.
2-126	· Allergies	**R**	X			A	Through Clinician Order Entry Module.
2-127	· Contraindications;	**R**	X			A	Through Clinician Order Entry Module.
2-128	· Flags contraindications and flags for required dosage adjustments based on clinical parameters (e.g., renal function)	**R**	X			A	Through Clinician Order Entry Module.

2-129	· Interactions between drugs:	**R**	X			A	Through Clinician Order Entry Module.
2-130	· Food-drug interactions.	**O**	X			A	Through Clinician Order Entry Module.
2-131	· Provides the capability to calculate creatinine clearance	**O**	X			A	Through Clinician Order Entry Module.
2-132	Allows pharmacists to assign a conditional or pending status to an order during order verification including but not limited to:						
2-133	· "Soft stops" to request input of required lab values	**O**	X			A	Through the use of Intelligent Alerts.
2-134	· Functionality to display order status chronologically	**O**	X			A	Through Clinician Order Entry Module.
2-135	· Functionality to "drill-down" to detailed information for pending orders	**O**	X			A	Through Clinician Order Entry Module.
2-136	Maintains audit trail of pharmacy personnel verifying and validating pharmacy orders	**R**	X			A	Through Clinician Order Entry Module.
3	**Pharmacy Operations and Management**						
	Pharmacy Information System: Patient Management / Demographics						
3-1	Functionality to create, maintain, update and or interface patient identification data (functionality to retrieve data from external Hospital Information System) including, but not limited to data elements:		X			A	
3-2	·Person Unique Identifier (e.g. Unique Identification number)	**R**	X			A	Medical Record Number
3-3	·Patient Hospital Identifier (historic and current)	**R**	X			A	Visit ID
3-4	·Alternate Identifier	**O**	X			A	+ More on patient tab or profile
3-5	·Name, including last name, middle name or initial, first name, and or other unique identifier, (e.g., mothers maiden name)	**R**					
3-6	·Date of birth (DOB)	**R**	X			A	
3-7	·Date of Death, if applicable	**O**	X			A	
3-8	·Gender	**R**	X			A	
3-9	·Race	**R**	X			A	
3-10	·Ethnicity	**O**	X			A	Can accommodate with a user defined field.
3-11	·Patient Pregnant (Y/N)	**R**	X			A	
3-12	·Patient address upon admission	**O**	X			A	
3-13	·County	**O**	X			A	
3-14	·Social Security Number (SSN)	**O**		X		D	Can be added.

3-15	Functionality to maintain, document and store, & export allergy / intolerance / adverse drug reactions, individual drug therapy precautions, including, (but not limited to):						
3-16	· Reaction description;	**R**	X			A	Clinical alerts/clinical interventions
3-17	· Reaction date;	**R**	X			A	
3-18	· Reaction severity;	**R**	X			A	
3-19	· Allergen/agent code and name;	**R**	X			A	
3-20	· Treatment Intervention description;	**O**	X			A	Clinical Intervention
3-21	· Drug therapy precautions;	**R**	X			A	
3-22	· Capability to add clinical information based on patient and care giver information.	**R**	X			A	Clinical Intervention
3-23	Provides the capability to create, maintain and store patient pharmacological data (with export capabilities) including, but not limited to:						
3-24	· Prescription / Transaction number	**R**	X			A	
3-25	· Drug name / NDC	**R**	X			A	
3-26	· Drug dosage	**R**	X			A	
3-27	· Drug strength	**R**	X			A	
3-28	· Drug quantity	**R**	X			A	
3-29	· Route	**R**	X			A	
3-30	· Directions, “Sig”	**R**	X			A	
3-31	· Prescriber	**R**	X			A	
3-32	· Dispensing Pharmacist	**R**	X			A	
3-33	· Prescription issue date	**R**	X			A	
3-34	· Date prescription filled	**R**	X			A	
3-35	· Date/Time first or next dose due to be administered	**R**	X			A	
3-36	· Reason a drug is prescribed	**R**	X			A	Indication field
3-37	· Drug compliance note, date, time and pharmacist identifier when recorded	**R**	X			A	
3-38	· Physician's / Pharmacist's notes Section	**R**	X			A	Notes come over from Clinician Order Entry Module from the physician.

	Patient Profile / Medical History						
3-39	Supports retrieval of Patient / Client Profile records in the pharmacy system by at least three of the following:						
3-40	· Patient identification number;	**R**	X			A	Visit ID
3-41	· Hospital inpatient identification number, if different	**R**	X			A	
3-42	· Patient name;	**R**	X			A	
3-43	· Patient's date of birth;	**R**	X			A	
3-44	· Partial patient last name (e.g., first few letters of patient's name)	**R**	X			A	
3-45	· Social Security Number	**O**	X			A	Only through a report.
3-46	Provides specific area in pharmacy system to document data elements including, but not limited to:						
3-47	· Height	**R**	X			A	
3-48	· Weight	**R**	X			A	
3-49	. Temperature	**O**	X			A	
3-50	· Pulse rate	**O**	X			A	
3-51	· Blood pressure	**O**	X			A	
3-52	· Body surface area	**R**	X			A	
3-53	· Lab values	**R**	X			A	
3-54	· Calculated clinical values (e.g., Absolute Neutrophil Count (ANC), Creatinine Clearance (CrCl)	**R**	X			A	
3-55	· Ideal body weight (IBW)	**O**	X			A	
3-56	· Body Mass Index (BMI)	**O**	X			A	Can accommodate using a user-defined field.
3-57	Provides specific area in pharmacy system to support an interface with, (and or retrieve data from external systems, e.g., external Lab), data elements found in other systems / databases including, but not limited to data elements listed directly above.	**O**	X			A	
3-58	Supports selection of patients by a search function through names listed on screen.	**R**	X			A	
3-59	Provides the capability to create patient reports using:						
3-60	· patient Profile data, (e.g., demographic),	**R**	X			A	Some are standard while others can be created using Infomaker Report Writer.

3-61	· patient Drug Profile,	**R**	X			A	Some are standard while others can be created using Infomaker Report Writer.
3-62	· patient Medical History	**R**	X			A	Some are standard while others can be created using Infomaker Report Writer.
3-63	· patient Medication History	**R**	X			A	Some are standard while others can be created using Infomaker Report Writer.
	Clinical Information / Resources						
3-64	Automatically verifies and checks for (current and or new orders):						
3-65	· New medication orders for conflicts with all medication orders (IVs, medications)	**R**	X			A	
3-66	· Conflicts with patient's allergies.	**R**	X			A	
3-67	· New IV admixture orders for conflicts with previous IVs and medication orders	**O**	X			A	
3-68	· New IV admixture orders for conflicts with patient's allergies.	**R**	X			A	
3-69	Displays all medication interactions for patients.	**R**	X			A	
3-70	Flags all allergy, drug, and duplicate therapy conflicts in order processing screens.	**R**	X			A	
3-71	Functionality, support and with audit trail on-line acknowledgement of interactions (with authorized access) identifying overrides.	**R**	X			A	
3-72	Provides ability to maintain a drug interaction database.	**R**	X			A	This is a feature of First DataBank.
3-73	Provides the capability to create and maintain a list of allergy / intolerance causing drugs/agents for tracking, reporting and export capability to external systems, including:						
3-74	· Drug / Agent name	**O**	X			A	Available in Pharmacy Module.
3-75	· Allergy/intolerance description	**O**	X			A	Available in Pharmacy Module.
3-76	· Responsible Care Provider	**O**	X			A	Available in Pharmacy Module.
3-77	· Date	**O**	X			A	Available in Pharmacy Module.
3-78	· patient name / unique identifier	**O**	X			A	Available in Pharmacy Module.
3-79	· Adverse Drug Event (ADE) description	**O**	X			A	Available in Pharmacy Module.
3-80	Supports retrieval of allergy / intolerance causing drugs by:						
3-81	· Drug/Agent name	**R**	X			A	Available in Pharmacy Module.
3-82	· Recording date	**R**	X			A	Available in Pharmacy Module.

3-83	· patient	**O**	X			A	Available in Pharmacy Module.
3-84	· Reaction	**O**	X			A	Available in Pharmacy Module.
3-85	Provides the capability to direct Allergy Causing Drug reports to:						
3-86	· a printer to print hard copy (default);	**R**	X			A	Available in Pharmacy Module.
3-87	· screen for viewing;	**R**	X			A	Available in Pharmacy Module.
3-88	· a file	**R**	X			A	Available in Pharmacy Module.
3-89	· Email	**O**	X			A	Not directly from Pharmacy application; however, file can be printed and attached to an email.
3-90	Provides the capability to calculate ideal body weight, dosing weight, adjusted body weight	**O**	X			A	Available in Pharmacy Module.
3-91	Provides access to electronic references	**O**	X			A	Available in Pharmacy Module.
3-92	Provides pharmacokinetics software package or functionality to interface with an off the shelf package.	**O**			X	E	
3-93	Provides or supports direct Interface with clozapine online reporting systems, (Clozaril/Ivax/Teva clozapine registries)	**O**		X		D	Can be added.
3-94	Supports / provides electronic documentation of pharmacist interventions:						
3-95	· In drug therapy.	**R**	X			A	
3-96	· For predefined (or occurrence), identification of dollar values for all interventions, and	**O**	X			A	
3-97	· Generation of user defined reports summarizing interventions and values.	**O**	X			A	
3-98	Supports interoperability with Event Reporting Software [e.g., National Association of State Mental Health Program Directors Research Institute, Inc. (NRI)] for medication errors, Adverse Drug Reactions (ADRs), Adverse Drug Events (ADEs) and medication variances.	**O**		X		D	Can be added.
3-99	Functionality to check relevant lab values (e.g., creatinine clearance, lithium level, ANC, WBC), and send dose alerts based on conflicts	**R**	X			A	
3-100	Supports functionality to re-dose based on the alert, as per user defined rules	**O**	X			A	

3-101	Clinical warnings display together as a single set of messages with links to relevant references	**O**	X			A	
3-102	Supports downloading, interfacing and drug file updating for specific formulary definitions, if available, from numerous Pharmacy Third Party Medicare Part D Drug Plans, e.g., Aetna, Humana, etc.	**O**		X		D	Can be added.
3-103	Supports electronic updates to clinical database regularly, (e.g., at least quarterly).	**R**	X			A	Updates are provided monthly.
3-104	Research / access to on line, up to date drug information and drug monographs for distribution:						
3-105	· Prescribers monographs	**R**	X			A	
3-106	· Patient monographs	**R**	X			A	
	Order Processing						
3-107	Supports easy access to drug information, (e.g., not having to navigating through multiple screens)	**R**	X			A	
3-108	Provides the capability to access patient Information prior to order processing including and as applicable / available:		X			A	
3-109	· patient demographic profile;	**R**	X			A	
3-110	· patient Allergies	**R**	X			A	
3-111	· patient Medication Profile;	**R**	X			A	
3-112	· patient Medical History;	**R**	X			A	
3-113	· patient Financial and Billing Profile	**R**	X			A	Through the use of a report.
3-114	Allows changing and updating medication orders without having to re-key all order information.	**R**	X			A	
3-115	Provides ability to build and maintain for quick order entry:		X			A	
3-116	· Service-oriented order sets (e.g., admission order sets/ pre-procedure medications preps).	**R**	X			A	
3-117	· Protocol order sets for medications (e.g., tetracycline to be given on empty stomach)	**R**	X			A	
3-118	Supports functionality for on-line drug lookup:						
3-119	· By trade or generic name;	**R**	X			A	

3-120	· From pick-lists or drop down lists;	**O**	X			A	
3-121	· Offer variety of search methodologies (e.g., Soundex) with partial / similarly spellings.	**O**	X			A	
3-122	Supports various packaging and order types & parameters, including:						
3-123	· Unit dose medication - one or more individually packaged items are used in the dose;	**R**	X			A	
3-124	· Multi-dose (a.k.a. "bulk") medication - dispensing size is larger than a dose;	**R**	X			A	
3-125	Provides ability to specify multiple routes of administration within a single order (e.g., PO or IM).	**O**	X			A	
3-126	Supports display of drug warnings (e.g., gender-specific, age-specific).	**R**	X			A	
3-127	Provides screens that provide guidelines to order formulary equivalents for non-formulary medications.	**O**	X			A	
3-128	Automatically calculates medication doses and supply needs for patients within a user-specified time period.	**R**	X			A	
3-129	Allows activation of suspended orders	**R**	X			A	
3-130	Provides ability to select and reactivate orders from previous patient visits.	**O**	X			A	
3-131	Automatically adjusts patient charges after reconciliation of fill list with actual usage.	**R**	X			A	
3-132	Allows functionality to suspend individual medication orders	**R**	X			A	
3-133	Supports storage of medication orders pending verification by pharmacist.	**R**	X			A	
3-134	Flag orders when filled	**R**	X			A	
3-135	Allows discontinuing of orders	**R**	X			A	
3-136	Functionality for automatic stop orders based on user defined policy by drug.	**R**	X			A	

3-137	Functionality for electronic notification or alerting to appropriate care giver(s) of interventions, potential drug interactions, adverse drug reactions, and/or medication errors.	**O**	X			A	
3-138	Automatically checks for and flags duplicate medication orders.	**R**	X			A	
	Provides ability to re-sort data in pharmacist review queue (e.g. by time, floor, status), as applicable.	**O**	X			A	
	Automatically or by user query, prints medication updates to cart fill list showing additions, changes, deletions to patient profile since last fill list.	**R**	X			A	
	Functionality to create daily or weekly patient Medication Administration Record (MAR) showing both generic and trade medication names.	**R**	X			A	
	Provides option to generate Medication Administration Record updates/labels for new medications or changes as they are processed.	**R**	X			A	
	Creates Medication Administration Record for multiple dispensing days for a unique location.	**R**	X			A	
	Creates a report by location to inform physicians and nurses of orders requiring renewal.	**R**	X			A	
	Creates a report by location to inform physicians and nurses of orders being held for clarification/re-writing/special ordering	**R**	X			A	
	Creates report on drug discontinue notices and stopped orders on MAR.	**R**	X			A	
	Provides the capability to direct order processing reports to:						
	· A printer to print hard copy (default);	**R**	X			A	
	· A screen for viewing;	**R**	X			A	
	· A file	**R**	X			A	
	· Email	**O**	X			A	Not directly from the Pharmacy application; however, a file can be printed and attached to an email.
	Provides ability to enter each ingredient and quantity of a compound and a section for notes for directions of making (Compound Log)	**R**	X			A	

	IV Order Processing						
•	Provides an IV admixture pathway	**R**	X			A	
•	Allows scheduling of multiple ingredients standing IV orders.	**R**	X			A	
•	Allows on-line changes to IV orders without having to re-key all order information.	**R**	X			A	
•	Maintains audit trail of persons making changes to IV orders.	**R**	X			A	
•	Supports order processing of IV bottles, IV bags, mini - bottles, mini-bags, syringes & solution orders	**R**	X			A	
•	Accommodates multiple (up to 10) ingredients in IV order	**R**	X			A	
•	Provides on-line IV Agent lookup:						
•	· By trade or generic name;	**R**	X			A	Using “Find” window.
•	· From pick-lists or drop down lists	**O**	X			A	Available with Info Button.
•	Supports easy access to IV drug information (not having to navigate through multiple screens).	**R**	X			A	
•	Prior to order processing, provides the capability to access patient Information, particularly IV history, including those listed in Order Processing section directly above.	**R**	X			A	
•	Provides user customizable IV labels	**R**	X			A	
•	Allows entry of multiple component piggyback items.	**R**	X			A	
•	Provides IV compatibility checking.	**R**	X			A	
•	Checks for drug interactions with other medications the patient has ordered when entering IV.	**R**	X			A	
•	Supports creation of IV production worksheets for preparation and administration of IVs	**O**	X			A	
•	Creates IV summary update worksheets showing new orders for a user defined time period.	**R**	X			A	Using Infomaker Report Writer
•	Supports functionality for IV MARs listed by room number, bed, and unit.	**O**	X			A	

	Leave of Absence (LOA)/Discharge Dispensing						
•	Provides the capability to create and maintain patient prescription data and billing support for, including but not limited to:						
•	· Access to all patient demographic data referenced throughout this document	**R**	X			A	
•	· Prescription number	**R**	X			A	
•	· Drug trade name	**R**	X			A	
•	· Drug number (NDC, GPI) National Drug Codes (NDC)s are unique 11-digit codes that identify discrete drug products. Generic Product Identifier (GPI) is the Master Drug Data Base (MediSpan™) Medispan's number created such that all Penicillin 500 mg tabs all have the same GPI number even though there may be 50 different NDC numbers. During a prescription filling transaction, it is common for a substitute drug to be dispensed in place of the specific drug that was requested (i.e., prescribed) by a treating physician. Drug substitution complicates the reporting requirements related to a prescription filling transaction, which are typically established by third-party payors (e.g., an insurance company, Medicare, Medicaid, etc.). Third-party payors increasingly require more specific information on the actual drug dispensed to fill a prescription. Today third-party payors may require that the exact drug name, drug number (e.g., NDC, GPI, etc.), and drug package size as dispensed be reported. In the future, it is anticipated that the third-party payors will require additional information on the actual drug dispensed.	**R**	X			A	With IPOLA. Contractor uses FDB and FDB uses a Master Code which sounds similar to GPI number. The system does allow reporting off of the Master Code.
•	· Drug manufacturer	**R**	X			A	
•	· Drug strength	**R**	X			A	
•	· Quantity prescribed	**R**	X			A	
•	· Patient Instructions	**R**	X			A	
•	· Number of refills	**R**	X			A	
•	· Refill limitations	**R**	X			A	
•	· Quantity dispensed	**R**	X			A	
•	· Date filled	**R**	X			A	

•	· Number of days supply	**R**	X			A	
•	· Discontinue date	**R**	X			A	
•	· Prescriber / Practitioner Number (e.g., controlled substances)	**O**	X			A	
•	· Pharmacist / technician initials	**R**	X			A	
•	· Cost	**R**	X			A	
•	· Dispensing fee	**O**	X			A	
•	· Total price	**O**	X			A	
•	· Third party allowed charge	**O**	X			A	
•	· Patient counseling instructions	**R**	X			A	
•	· Pharmacy notes	**R**	X			A	
•	· Expiration date of drug	**R**	X			A	
•	· Lot number of drug	**O**	X			A	
•	· Caution code	**R**	X			A	
•	· Date, time and user-stamped notations about patients, clinical issues, billing issues, etc., (Notes and outcomes area: ideally, attached to patient and office documents in several different multimedia formats, including images, movies, audio files and Microsoft Office Documents within pharmacy system or, supports interface to system that provides)	**O**		X		D	Can be added.
•	· Supports functionality for clinician messaging – "sticky notes" which are not part of the medical record	**O**	X			A	
•	· Set Recall Notices concerning patient-related issues, e.g., billing, lab due dates, etc.	**O**	X			A	With use of Infomaker Report Writer.
•	Ability to print multiple labels to fill multiple packaging requirements, i.e., weekly supplies, two week supplies, etc.	**R**	X			A	
•	Supports electronic transmissions of Third party claims	**O**	X			A	
•	Functionality for electronic reconciliation with third parties insurances:		X			A	
•	· create detailed prescription register report by third party plan; new prescriptions, refills	**O**	X			A	

•	Functionality to retrieve patient instructions with user defined mnemonic codes.	**R**	X			A	
•	Functionality to edit patient instructions without re-keying entire order.	**R**	X			A	
•	Functionality to retrieve prescriber names with user-defined mnemonic codes.	**R**	X			A	
•	Functionality to add new prescribers to prescriber master file without backing out of prescription filling function.	**R**	X			A	
•	Supports limitations on refills/fill quantities of controlled substances.	**R**	X			A	
•	Functionality to retrieve prescription information using prescription number.	**R**	X			A	
•	Functionality to retrieve drug names with user-defined mnemonic codes.	**R**	X			A	
•	Provides functionality to:						
•	· enter generic or alternate drug name when filling prescriptions,	**R**	X			A	
•	· enter generic or alternate drug name when refilling prescriptions	**R**	X			A	
•	· document generic substitution	**R**	X			A	
•	· add/activate drugs to formulary or drug master file without backing out of prescription filling	**O**	X			A	
•	· perform price checks	**O**	X			A	
•	· override standard prices	**O**	X			A	
•	· override price	**O**	X			A	
•	· add discontinue date	**R**	X			A	
•	· alert when "no refills"	**O**	X			A	
•	· display refill information on same screen as original prescription	**O**	X			A	
•	· ad hoc reporting of prescription information, drug utilization (e.g., high cost antipsychotics), third party claims and receivables, drug ranking by use & cost, and price	**R**	X			A	

•	· create detailed prescription register report by third party plan; new prescriptions, refills	**O**	X			A	
•	Functionality to support Medication Reconciliation procedures / practices across settings, services, providers or levels of care.	**R**	X			A	Through the use of our Medication Reconciliation Tool.
•	Provides ability to detect drug-drug interactions for drugs that may or may not be included in outpatient profile, (medications not dispensed by pharmacy).	**O**	X			A	
	Inpatient Labeling						
•	Automatically and on demand, prints labels:						
•	· Medication / IV once order processing is completed	**R**	X			A	
•	· Supports option to print labels in batches	**R**	X			A	
•	Ability to print the following data elements (medication label) including but not limited to:						
•	· Order number	**R**	X			A	
•	· Prescription number, if desired, for specific classes of drugs (e.g., controlled substances)		X			A	
•	· Patient name,	**R**	X			A	
•	· Location (room number, bed, unit, ward, unit, building)	**R**	X			A	
•	· Frequency of administration / schedule	**R**	X			A	
•	· Preparation date; time is desirable	**R**	X			A	
•	· Order Start date and time	**R**	X			A	
•	· Expiration date	**R**	X			A	
•	· Date filled or refilled	**R**	X			A	
•	· Prescriber name	**R**	X			A	
•	· Generic name	**R**	X			A	
•	· Trade name	**R**	X			A	
•	· Patient instructions	**R**	X			A	
•	· Additional space for long instructions (specify number of characters allowed)	**R**	X			A	
•	· Capability to increase fonts size for easier reading	**O**	X			A	
•	· Drug dosage form and strength	**R**	X			A	
•	· Drug quantity	**R**	X			A	

•	· Pharmacist / Pharmacy technician initials	**R**	X			A	
•	· Remaining refills, if applicable	**O**	X			A	
•	Ability to print the following data elements on IV label including but not limited to:						
•	· Additives, base solution, total volume, and IV number	**R**	X			A	
•	· Flow rate and hang time	**R**	X			A	
•	· Storage instructions	**R**	X			A	
•	· Drug-specific administration directions	**R**	X			A	
•	· Order number	**R**	X			A	
•	· Patient name,	**R**	X			A	
•	· Location (room number, bed, unit, ward, bldg)	**R**	X			A	
•	· Preparation date and time	**R**	X			A	
•	· Expiration date	**R**	X			A	
•	· Prescriber Name	**R**	X			A	
•	Allows customized updates to label content and format without custom programming.	**R**	X			A	
	Discharge/Leave of Absence (LOA) Labeling						
•	Prints the following State & federal required data elements on prescription label, including, but not limited to:	**R**	X			A	
•	· Pharmacy name, address and telephone number	**R**	X			A	
•	· patient name / patient ID number	**R**	X			A	
•	· Prescription number	**R**	X			A	
•	· Date filled or refilled	**R**	X			A	
•	· Prescriber name	**R**	X			A	
•	· Generic name, trade name	**R**	X			A	
•	· Federal Transfer statement ("Federal Law prohibits the transfer ..")	**R**	X			A	
•	· Patient instructions	**R**	X			A	
•	· Additional space for long instructions (specify number of characters allowed)	**R**	X			A	
•	· Capability to increase font size for easier reading	**O**	X			A	

•	· Drug dosage form and strength	**R**	X			A	
•	· Drug quantity	**R**	X			A	
•	· Pharmacist / Pharmacy technician initials	**R**	X			A	
•	· Remaining refills	**R**	X			A	
•	· Expiration date of medication ("Do not use after…")	**R**	X			A	
•	· 1-800 number for reporting adverse events ("side effects statement") --(new FDA requirement 2009)	**R**	X			A	
•	Allows customized updates to label content and format without custom programming.	**R**	X			A	If the user knows SQR language, they may customize their own labels. If not, Contractor can customize labels on a time and materials basis, based on mutually agreed upon specifications.
•	Prints the following State & federal required data elements on pharmacy copy of prescription label, including, but not limited to:						
•	· User defined (e.g., account number)	**R**	X			A	
•	· Pharmacy name, address and telephone number	**R**	X			A	
•	· Client / patient name/ patient I'D number	**R**	X			A	
•	· Prescription number	**R**	X			A	
•	· Date filled or refilled	**R**	X			A	
•	· Prescriber name	**R**	X			A	
•	· Generic name	**R**	X			A	
•	· Trade name	**R**	X			A	
•	· Drug manufacturer	**R**	X			A	
•	· Patient instructions	**R**	X			A	
•	· Drug dosage form and strength	**R**	X			A	
•	· Drug quantity	**R**	X			A	
•	· Pharmacist/Pharmacy technician initials	**R**	X			A	
•	· Remaining refills	**R**	X			A	
•	· Drug number	**R**	X			A	
•	· Third party coverage code	**O**	X			A	Through use of a user-defined field.
•	Provides ability to print mailing labels.	**O**	X			A	

•	Prints the following data elements on “sales” receipt or “batch” invoices:		**ALL ITEMS BELOW ARE BASED ON CLIENT’S LABEL**				
•	· Client / patient name / patient I'D number	**O**	X			A	
•	· Mailing address	**O**	X			A	
•	· Prescription charge and or co-pay	**O**	X			A	
•	· Prescription number	**O**	X			A	
•	· Date filled	**O**	X			A	
•	· Prescriber name	**O**	X			A	
•	· Drug name	**O**	X			A	
•	· Drug strength	**O**	X			A	
•	· Drug dosage form and strength	**O**	X			A	
•	· Drug quantity	**O**	X			A	
•	· Pharmacy name and phone number	**O**	X			A	
•	· Medication information sheets	**O**	X			A	
•	· Medication warning labels	**O**	X			A	
	Labels / Printing, General						
•	Provides user customizable medication labels.	**R**	X			A	
•	Supports the storage and retrieval of extemporaneous labels.	**R**	X			A	
•	Generates packaging labels both for initial supply and or cart fill list during the order entry process.	**R**	X			A	
•	Supports functionality / interface to print a unique bar code identifier on each individual prescription label.	**O**	X			A	
•	Allows interfacing between this label, a bar code reader and the computer system to track a prescription at any step in the dispensing/return/credit/destroy process	**O**	X			A	
•	Rx label meets all requirements of state and federal law.	**R**	X			A	
•	Provides for auxiliary messages to be tied to a drug and print on the label (e.g., Refrigerate, Protect from light)	**R**	X			A	Through instructions, etc.
•	Allows assignment of default printers by task with functionality to route to other printers as needed (configuration)	**R**	X			A	

•	Provides the capability to direct patient reports to:						
•	· A printer - hard copy (default);	**R**	X			A	
•	· A screen	**R**	X			A	
•	· A file	**R**	X			A	
•	· Email	**O**	X			A	Not directly from the application; however, a file can be printed and attached to an email.
•	Supports prescription labeling for persons with vision loss (American Foundation for the Blind, ASCAP)	**O**			X	E	

	Drug File						
3-325	Drug file does not require end-user to build -- drug file is automatically downloaded and updated electronically. Fully built, vendor built drug files with automatic drug and price file maintenance downloads, preferably over the internet -- should not require end-users to "build" the drug file or to update manually drug product information (change of NDC, etc.) or prices. SPECIFY FREQUENCY AND METHOD OF UPDATING DRUG AND PRICE FILES. SPECIFY HOW DRUG FILE IS BUILT AND MAINTAINED.	**R**	X			A	Drug field is provided through First DataBank with some set up required by the client.
3-326	Newly available drugs are automatically downloaded into drug file, including price updates, without requiring user to "build" the drug file	**R**	X			A	User must manually run Firest DataBank updates in order to get information on all new drugs.
	Drug Formulary Management						
•	Supports multiple trade names for a single formulary item.	**R**	X			A	
•	Functionality to manage, maintain, and add to (in some cases) the Drug data Formulary and dictionary, including, (but not limited to):						
•	· Drug trade name	**R**	X			A	
•	· Drug generic name	**R**	X			A	
•	· Drug code from formulary	**R**	X			A	
•	· Drug mnemonics	**R**	X			A	
•	· Indications and usage	**R**	X			A	
•	· Contraindications	**R**	X			A	
•	· Precautions	**R**	X			A	
•	· Drug/ Food interactions	**R**	X			A	DIF alerts do not have client interface for changes.
•	· Adverse reactions	**O**	X			A	
•	· Drug abuse and dependence	**O**	X			A	Through use of a user-defined field.
•	· Administration route	**R**	X			A	
•	· Drug dose	**R**	X			A	
•	· Drug strength	**R**	X			A	
•	· Drug dispensing unit	**R**	X			A	
•	· Item packaging	**R**	X			A	
•	· Drug cost	**R**	X			A	
•	· Drug Price (AWP, AMP)	**R**	X			A	

•	· Special instructions	**R**	X			A	
•	· Expiration date	**R**	X			A	
•	· Drug manufacturer(s)	**O**	X			A	
•	· Controlled substances	**R**	X			A	
•	· NDC / DIN / bar code	**R**	X			A	
•	Automatically links generic equivalents (package sizes, multiple manufacturers)	**R**	X			A	
	Patient Medication Profile						
3-352	Generates and prints current Patient Medication Profile	**R**	X			A	
3-353	Generates current Patient Medication Profile and allows for electronic transfer of the profile (and to specify methodology, e.g., as email attachment, direct transfer of information via network printer, etc.)	**R**	X			A	Via a printer, not email.
	Cart Fill Listings						
•	Generates and prints a customized cart fill list by unit or patient, daily, weekly, monthly, custom.	**R**	X			A	
•	Allows user update/modification of cart fill list to reflect product actually required for/supplied to cart fill.	**R**	X			A	
•	Prints supplement (update) for modification to fill list.	**R**	X			A	
•	Lists Routine orders separate from PRN orders on cart fill list.	**R**	X			A	
•	Ability to print customizable cart fill list/report by a variety of options, (sort/select, etc.) (e.g., fill list for all controlled substances across multiple patient units)	**R**	X			A	
•	Prints a pick list for unit dose cart fills (for each nursing unit's cart; the system prints a list of which medications will be needed, and how many doses of each.)	**R**	X			A	
	Floor Stock						
3-360	Functionality for management of floor stock (or Night Drug Cabinet or clinic stock) inventories.	**O**	X			A	Through maintained satellite files in the Pharmacy Module.
3-361	Allows unit specific floor stock/Night Drug Cabinet definition, and flags (soft stop) at order entry point. Maintains and prints lists of floor stock items for each unit.	**O**	X			A	

	Inventory & Purchasing						
	Provides functionality to create and maintain all stock data, including, (but not limited to):						
	· Drug Identifying number / reorder number	**R**	X			A	Through use of Contractor's Purchasing/ Receiving/Inventory Module.
	· Drug name	**R**	X			A	Through use of Contractor's Purchasing/ Receiving/Inventory Module.
	· An "Emergency level" (disaster planning)	**O**		X		D	Can be added.
	· Minimum stock level	**R**	X			A	Through use of Contractor's Purchasing/ Receiving/Inventory Module.
	· Maximum stock level	**R**	X			A	Through use of Contractor's Purchasing/ Receiving/Inventory Module.
	· Reorder level	**R**	X			A	Through use of Contractor's Purchasing/ Receiving/Inventory Module.
	· Current cost	**R**	X			A	Through use of Contractor's Purchasing/ Receiving/Inventory Module.
	· Average cost	**R**	X			A	Through use of Contractor's Purchasing/ Receiving/Inventory Module.
	· Average monthly use	**R**	X			A	Through use of Contractor's Purchasing/ Receiving/Inventory Module.
	· Order size	**R**	X			A	Through use of Contractor's Purchasing/ Receiving/Inventory Module.
	· Primary vendor	**R**	X			A	Through use of Contractor's Purchasing/ Receiving/Inventory Module.
	· Secondary vendor	**O**			X	E	
	Supports functionality for perpetual Inventory monitoring / ordering system via an electronic interface / ordering with wholesalers).	**R**	X			A	Through use of Contractor's Purchasing/ Receiving/Inventory Module.
	Flags contract versus off contract items	**O**		X		D	Can be added via ad hoc reports.
	Create, edit and view new orders, as well as tracking the status of existing orders	**R**	X			A	

	Store and edit inventory information	**R**	X			A	
	Establish pricing on a per product basis	**R**	X			A	
	Establish multiple pricing lines for each inventory item (e.g., Average Wholesale Price (AWP) vs Average Manufacturer Price (AMP) vs Wholesale Acquisition Cost (WAC) vs Maximum Allowable Cost (MAC)	**O**	X			A	The Pharmacy Module has four pricing fields.

	Track the quantity of each product on hand and what is dispensed	**R**	X			A	
	Establish reorder alerts for low inventory levels	**R**	X			A	Through the use of the Purchasing/Receiving/ Inventory Module a list based on inventory level markers can be generated.
	Track maintenance records and depreciation values on an item-by-item basis	**O**	X			A	Can have graduated scale of pricing based on last in-first in, etc.
	Supports on-line inquiry of open and closed invoices	**O**	X			A	
	Supports on-line inquiry into all purchase orders / invoices for a particular item status of quantities on hand and on order.	**O**	X			A	
	Provides audit trail of changes made to purchases	**R**	X			A	
	Creates stock usage report of past 12 months and YTD quantities and dollar volume by item and location.	**O**	X			A	
	Allows pharmacy to establish minimum stock levels, standard purchase quantities; and generates purchase orders automatically on a pre-established frequency, or on demand, for submission to primary wholesaler.	**R**	X			A	
	Interfaces with the wholesaler's (e.g., AmerisourceBergen), electronic order entry system for automatic updates to inventory with order receipt.	**O**	X			A	
	Generates report with identification of products confirmed for shipment and identified shortages	**O**	X			A	
	Maintains current inventory levels/ quantities in real time when items are issued, returned, received or transferred.	**O**	X			A	
	Provides text comment field for notes on each item.	**O**	X			A	
	Supports entry of charges and credits for items returned	**R**	X			A	
	Computes and reports the most economical quantity to order (EOQ) based on usage w/ ability to recommend stock levels	**O**	X			A	
	Allows adjustments to inventory based on physical inventory counts.	**R**	X			A	
	Print physical inventory worksheets by location / drug class	**R**	X			A	
	Supports interface to hand-held computers used to gather item quantity information.	**O**			X	E	
	Provides audit trail of all adjustments to inventory	**R**	X			A	

	Creates out-of-stock items report.	**O**		X		D	Can be added via ad hoc reports.
	Creates report of overstock items.	**O**		X		D	Can be added via ad hoc reports.
	Tracks and reports trends for item usage	**O**	X			A	Classifies ABC list of movers.
	Tracks item shelf life based on purchase or expiration date and print item obsolescence report.	**O**		X		D	Can be added via ad hoc reports.
	Ability to support RFID tags	**O**			X	E	
	Ability to interface/support reconciliation of Returned Drugs with records of contracted Returned Goods processor; minimally to reconcile inventory when expired/damaged drugs are returned	**R**		X		D	Can be added via ad hoc reports.
	Ability to extract from the system database re-called items and or discontinued items.	**R**		X		D	Can be added via ad hoc reports.
	For multi-source products: Automatically links and switches from one manufacturer's product to another when stock reaches 0; alternately, alerts pharmacy when stock nears 0 and allows for drug order to be converted to new/different manufacturer's product	**O**	X			A	Pooling
	Tracks inventory of:						
	· Controlled substances (apart from non-controlled substances/drugs)	**R**	X			A	
	· non-controlled drugs, included nonprescription products	**R**	X			A	
	· Stock transfers between locations	**O**	X			A	
	· Supports conversion from units of purchase to units of issue.	**O**	X			A	
	· Calculates inventory item cost using the average cost	**O**	X			A	
	· Stock status reports on demand.	**R**	X			A	
	Creates report of inventory turns by category, “turns” by location and in total.	**O**	X			A	
	Allows on-line updating of inventory quantities.	**R**	X			A	
	Automatically adjusts audit trail report of changes to inventory	**O**		X		D	Can be added.
	Automatically updates inventory quantities when medication / prescription orders/cart fills are filled.	**R**	X			A	

	Functionality to report recommended quantities based on usage using industry approved methodologies (e.g., Economic Order Quantity method).	**O**	X			A	
	Supports functionality for bar code scanning “out of inventory” or “dispensed” at pharmacist final check interfacing with the pharmacy computer system	**R**	X			A	
	Supports functionality for reading bar codes & scanning “in to inventory” of prescriptions & or medications received back from units, for credit .	**R**	X			A	
	Supports functionality for scanning of medications to be returned/destroyed and noted as such in the pharmacy computer system. Pharmacy able to document reason for return and reason for destruction/return processing.	**R**		X		D	Can be added.
	Supports functionality for automatic electronic update of list (AWP) price; acquisition cost; AMP (Avg. Manufacturers price); SPECIFY FREQUENCY OF AUTOMATIC UPDATING	**R**		X		D	Acquisition Cost is calculated when inventory is received.
	Supports functionality to generate reports of all modifications to product pricing.	**R**		X		D	Can be added.
	Supports the functionality of conducting a complete physical inventory and compare with purchased/dispensed items documented in the pharmacy system.	**R**	X			A	
	Supports functionality to cross-reference system to read multiple bar code formats for medications.	**O**			X	E	
	Cross-reference functionality to read GPI codes (Generic Product Identifier).	**O**			X	E	
	Supports functionality to print exception report on significant cost increases	**O**		X		D	AWP changes can be shown during the monthly FDB update process.
	Allows user defined limits on allowable range of electronic price modifications, i.e. allows user to stipulate the maximum % change to current data and includes any exceptions in reporting generated.	**O**			X	E	Price changes can be reviewed post update.

	Provides a means to reconcile doses from medication administration system with the pharmacy's inventory management system **(specify how)**.	**R**	X			A	Wastage function or through the patient charge credit process in Patient Profile.
	Supports the functionality for users to 'run':						
	· Current inventory levels report	**R**	X			A	
	· Stock status report.	**R**	X			A	
	· Generate daily stock usage report	**R**	X			A	
	· Daily stock transfer report	**O**	X			A	
	· Re-order report of items near minimum quantities	**R**	X			A	
	· User allowed to override	**O**	X			A	
	· Supports establishing "critical" re-order report of items below minimum quantities.	**O**	X			A	
	· Average cost of inventory report	**R**	X			A	
	· Low usage items	**O**	X			A	
	· Expired items	**O**	X			A	
	· Items on order	**O**	X			A	
	· Daily receipt / invoice of medications	**O**	X			A	
	· Exception report noting significant supplier cost increases or decreases.	**R**		X		D	Can be added.
	· Vendor performance analysis of orders, back orders, unfilled orders, and turnaround time, out of stock items	**O**		X		D	Can be added.
4	**Administration and Documentation of Medication**						
	Physician Order Renewals/ Medication Administration Record (MAR)						
4-1	Electronic Medication Administration Record (eMAR) functionality with the following additional options:						
4-2	· Functionality to generate and print physician orders for review/ renewal (coordinate with MAR section), by nursing unit, physician, and/or specific patient(s)	**R**	X			A	
4-3	Supports "customized" reporting of the Medication Administration Record (MAR) to include but not limited to, functionality to sort:		X			A	

4-4	· By pertinent parameter, (patient, location, physician, etc.)	**R**	X			A	
4-5	Supports functionality to print Medication Administration Record singly or by batch (e.g., nursing unit/s)	**R**	X			A	
4-6	Supports functionality for user read, write and print administration levels, as applicable.	**R**	X			A	
4-7	Supports functionality to provide a single day / multi day MAR (from 1 to 31 days).	**R**	X			A	May require customization based on the time required to make the change.
4-8	Supports functionality to separate MARs (profiles) by:						
4-9	· ROUTINE orders,	**R**	X			A	
4-10	· PRN orders,	**R**	X			A	
4-11	· TREATMENT orders,	**R**	X			A	If entered by pharmacy.
4-12	· Medication Schedule	**R**	X			A	
4-13	· respiratory orders,	**R**	X			A	If entered by pharmacy
4-14	· therapeutic drug class, etc.	**R**	X			A	
4-15	Supports functionality to print an optional 3rd drug name field on the MAR, (e.g., “AKA” field) with ability to activate or inactivate by user site. Example: BRAND = Wellbutrin SR; DOSE = 150mg; GENERIC = BUPROPION SUSTAINED-RELEASE; AKA = ZYBAN	**O**		X		D	Can be added.
4-16	Supports functionality to use one "form" and add a header title for the “PRN” record, for the “Routine” record, etc.	**O**	X			A	
4-17	Supports functionality to allow multiple orders for the same drug to be “linked” (to ensure orders are paired and listed sequentially on MAR).	**R**	X			A	
4-18	Supports functionality for patient specific non-medication orders, user defined, to be listed along with medications on the MAR.	**R**		X		D	Can be added.
4-19	Supports functionality for user defined information to be printed in the “timing” portion of the MAR, such as “Pulse”, “B/P”, or similar.	**R**		X		D	Can be added.
4-20	Supports functionality to include all necessary patient demographic information such as allergies, Diagnosis, location, etc., on MAR.	**R**	X			A	
4-21	Supports functionality for user defined sequencing of listing on MAR, such as by frequency or time of admin., or alphabetical.	**R**	X			A	
4-22	Both generic and brand names of the medication display on the nurse's active work list or MAR	**R**	X			A	

5	Billing Support						
	Billing Support for (Inpatient/LOA/Discharge) Dispensing						
5-1	Provides the capability to create and maintain patient prescription data including but not limited to those data fields listed above under Inpatient /Leave of Absence (LOA) Dispensing as defined in the Infosys Billing Output Interface (see file layout - Attachment 2)	**R**	X			A	
5-2	Provides option to automatically charge and submit billing record at time of drug administration or dispensing.	**R**	X			A	This is a feature of our Medication Administration Record Module.
5-3	Can make adjustments to accounts for unused drugs with appropriate authority.	**R**	X			A	
5-4	Compounds: can support billing each item / total charge	**R**	X			A	
5-5	Functionality to:						
5-6	· Create daily charges and credits report	**O**	X			A	
5-7	· Run billing discrepancy report	**O**	X			A	
5-8	· Compare doses charged versus stock usage by location	**O**		X		D	Can be added.
5-9	Provides the capability to direct reports that have been created to:						
5-10	· A printer - hard copy (default);	**R**	X			A	
5-11	· A screen	**R**	X			A	
5-12	· A file	**R**	X			A	
5-13	· Email	**O**	X			A	Not directly from application; however, a file can be printed and attached to an email.
	Data analysis / Reports						
5-14	· Controlled substances order and dispensing log(s)	**R**	X			A	
5-15	· Daily controlled substances dispensed report by:	**R**	X			A	
5-16	· Drug	**R**	X			A	
5-17	· Pharmacist	**R**	X			A	
5-18	· Prescription / order	**R**	X			A	
5-19	· Date	**R**	X			A	
5-20	Prescription activity reports for:						
5-21	· multiple Drugs	**R**	X			A	
5-22	· multiple prescriptions by time of day, date, week,	**R**	X			A	
5-23	· number of prescriptions per Pharmacy staff member	**R**	X			A	

5-24	Report by time interval, dollar value and number of prescriptions	**O**	X			A	
5-25	Prescriptions voided and deleted report.	**R**	X			A	
5-26	Patient transfer report	**O**	X			A	
5-27	Prescription transfer report	**O**	X			A	
5-28	Refill report:		X			A	
5-29	· Functionality to detect medication under-use and/or overuse for patients.	**O**			X	E	
5-30	Supports ability to flag early refills and report	**R**		X		D	Can be added.
5-31	Admin. Reports: number of outpatients and or inpatients per user defined date, time interval, location, number of new prescriptions, number of refills paid & unpaid (third party analysis)	**O**		X		D	Can be added.
5-32	Functionality to generate and print physician orders for review or renewal (coordinate with MAR section if applicable)	**R**	X			A	
5-33	System alerts / flags medication / prescription orders when price changes occur	**R**		X		D	Can be added.
5-34	Provides the capability to direct inpatient or outpatient dispensing reports to:						
5-35	a) A printer to print hard copy (default)	**R**	X			A	
5-36	b) A screen for viewing	**R**	X			A	
5-37	c) A file	**R**	X			A	
5-38	d) Email	**O**	X			A	Not directly from the application; however, a file can be printed and attached to an email.
6	**Reports**						
	Reports (data analysis, mining, inventory)						
6-1	Supports a report-writer with read, write, print or export functionality.	**R**	X			A	Infomaker is provided with the system; however, the State may use Crystal Reports if so desired.
6-2	The capability to print reports at any time to a printer in the pharmacy or on the nursing unit:		X			A	
6-3	· Network printers.	**R**	X			A	
6-4	· Local printers.	**O**	X			A	
6-5	Supports functionality to customize and sort information based on a variety of data options	**R**	X			A	

6-6	Supports functionality for SQL (Structured Query Language) reports to include additional filtering criteria for more specific screenings.	**O**	X			A	
6-7	Preview reports on screen before printing	**O**	X			A	
6-8	Export any report into a several different file formats	**R**	X			A	
6-9	Commonly used reports		X			A	All reports can be created using Infomaker Report Writer if the data is available in the database.
6-10	· Year-to-date comparison reports	**O**	X			A	
6-11	· Demographics on patients / customers	**O**	X			A	
6-12	Inventory Reports						
6-13	· All products on-hand for quantities greater than zero	**R**	X			A	
6-14	· Products that have reached or exceeded minimum reorder levels	**R**	X			A	
6-15	· Inventory break downs (by drug class, type, cost, etc.)	**O**	X			A	
6-16	· Detailed breakdown of all inventory, (line item detail)	**O**	X			A	
6-17	· List all products received into inventory	**R**	X			A	
6-18	· Inventory utilization reports	**R**	X			A	
6-19	Provides the Functionality to generate reports on all aspects of Prescription Activity:		X			A	All reports can be created using Infomaker Report Writer if the data is available in the database.
6-20	· Drug, Patient, Prescriber	**R**	X			A	
6-21	· Prescription Processing including treatment history	**R**	X			A	
6-22	· Customized report Functionality – Export and Import report Functionality	**R**	X			A	
6-23	· Compliance Reports	**R**	X			A	
6-24	· General Reports – including Usage, TOP 100 Drugs,	**O**	X			A	
6-25	· Controlled Substance,	**R**	X			A	
6-26	· Inventory Control	**R**	X			A	
6-27	Functionality to provide a Drug master file report by brand name, generic name and NDC	**R**	X			A	
6-28	Functionality to provide a Controlled drugs dispensed report.	**R**	X			A	
6-29	Functionality to provide Discharge medication summary report.	**R**	X			A	
6-30	Functionality to provide Drug allergy reports.	**R**	X			A	

6-31	Order entry alert “override" or "bypass” report.	**R**		X		D	Can be added.
6-32	Report identifying users that override or bypass alerts (e.g., allergies / ADRs, drug interactions, etc.)	**R**		X		D	Can be added.
6-33	Pharmacy daily activity journal by patient (Daily Audit Log)	**O**	X			A	
7	**Other Functionalities**						
	General System / Misc.						
7-1	“Real time” system.	**R**	X			A	
7-2	Functionality to run “on demand” rules, (supports “rules engine”)	**R**	X			A	
7-3	Functionality to allow multiple facilities to be defined within an enterprise; to support each in their unique medication management system options and rules. Patient transfer between facilities is supported by the system.	**R**	X			A	
7-4	Protocols, formularies, alerts, decision support rules, evidence-based medicine guidelines and other customized information can be selectively shared among users of the same clinical system to reduce setup time & maximize efficiencies.	**O**	X			A	
7-5	Functionality to provide testing environment to test system updates to the software prior to moving to production for assigned IT users and assigned business users	**R**	X			A	
7-6	Supports processing and dispensing of discharge prescriptions for use outside the hospital to meet all Michigan regulations.	**R**		X		D	Contractor strives to meet all State and Third Party regulations as part of our base system.
7-7	Provide support / functionality for System Shortcuts, including but not limited to:						
7-8	· “Hotkey” functionality /quick access menu options	**O**	X			A	
7-9	· Automatically add pre-stored information to many data fields using shortcut buttons	**O**	X			A	
7-10	· Provides multi-tasking environment	**O**	X			A	
7-11	Supports active and inactive, inpatient and outpatient medication list (current and historical for a minimum of 24 months)	**R**	X			A	

7-12	Functionality for differentiating look / sound alike and or High alert Medications (e.g., utilizing tall-man lettering, variable fonts and colors, etc.),	**R**	X			A	User currently must add Tallman. The application does not support variable fonts and colors.
7-13	Monitors the use of abbreviations and alerts / reports for user defined inappropriate / unapproved abbreviations	**R**	X			A	The State can mandate that the user not use unapproved abbreviations.
7-14	Ability to reconcile home/outpatient meds with inpatient medications at time of admission, user-defined level of care changes and at discharge	**R**	X			A	This functionality is available through our Medication Reconciliation Module.
7-15	Ability to access and update patient problem list and core clinical data (i.e. height, weight, and allergies including drill-down)	**R**	X			A	
7-16	Supports linkage with point of care devices for eMAR inquiry and charting and clinical data entry	**O**	X			A	
7-17	Supports ability to toggle between patient records	**O**	X			A	
7-18	Supports clinical decision support via alerts and bi-directional messaging / communications with providers	**O**	X			A	
7-19	Functionality to support hand-held devices and connect via wireless network for display and entry of clinical data	**O**	X			A	Hand-held devices can be utilized with the Medication Administration Record Module.
7-20	Supports functionality for specific drug orders triggering a recommendation or automatic ordering of laboratory test	**O**	X			A	
7-21	PRN orders (given as needed) require entry of the condition justifying administration, such as “for pain.” This option can be globally enabled or disabled per institutional policy	**R**	X			A	
7-22	Supports use of pharmacy alerts to manage formulary and drug therapy (restricted item, item requires P&T approval, No Longer Available, non-formulary, etc.)	**O**	X			A	
7-23	Supports the ability to require documenting reasons for ordering specific medications	**O**	X			A	
7-24	Functionality to specify security access that can verify orders	**R**	X			A	
7-25	Supports automatic time out capabilities if inactive for specified time period	**O**	X			A	

7-26	The pharmacy system supports the interface / ability to notify pharmacy a consult has been ordered	**O**	X			A	
7-27	Supports the ability to view history and source of prescriber's orders (e.g., RN versus MD)	**O**	X			A	
7-28	Supports a pharmacy work flow evaluation module	**O**	X			A	Requires use of the Medication Administration Record and Clinician Order Entry Modules.
	Interoperability / Interface						
7-29	Workflow software with interface functionalities:						
7-30	· Full Range of Reporting Functions	**R**	X			A	
7-31	Automated dispensing machine / software interface	**O**	X			A	
7-32	Computer decision support module (e.g., application capability / functionality to aid in making diagnostic and therapeutic decisions).	**R**	X			A	
7-33	The system is independent of and interfaces with numerous drug wholesalers.	**R**	X			A	
7-34	Lab interfaces	**O**	X			A	
7-35	Supports Admission/Discharge/Transfer (ADT) linkage for accurate patient tracking	**R**	X			A	
7-36	Electronic Medication Administration Record (eMAR) System	**R**	X			A	
7-37	Functionality to support medication order entry by computerized physician order entry (CPOE) with order confirmation by a pharmacist	**R**	X			A	
7-38	Functionality to support bar code medication administration system	**R**	X			A	Through use of the Medication Administration Record Module.
	Audit / Security						
7-39	Software must support strong passwords for user accounts	**R**		X		D	Can be added.
7-40	Requires users to create new passwords at defined intervals and require that the new password not match any of a defined number of used passwords.	**O**		X		D	Can be added.
7-41	Multiple access/security level functionality to identify orders that are not entered by pharmacists (and / or those that are).	**R**	X			A	
7-42	Support functionality for thumbprint technology	**O**			X	E	There are several third party companies that we can work with to accomplish this.

	The section below is to be filled out by the vendor and cost for this service is to be itemized separately in the attached Cost Table (Attachment C-Table B). The services/functionalities listed below are based upon the State's business needs for compliance with Medicare Part D.						
8	**Determining Third Party Coverage**						
8-1	Checks for expiration date of third party coverage	**O**		X		D	Can be added.
8-2	Provides ability to change or add to patient coverage without leaving prescription-filling screen	**O**	X			A	
8-3	Provides ability to verify if a drug is covered by third party coverage or requires Prior Authorization approval.	**O**		X		D	With IPOLA, eligibility process for coverage is verified, not individual drug.
8-4	Provides functionality to change payment type from cash to third party	**O**	X			A	
8-5	Provides functionality to display and change co-payment	**O**	X			A	
8-6	Access to all patient demographic data referenced throughout this document	**O**	X			A	
8-7	Supports centralized / user maintenance of pharmacy pricing and charge master file.	**O**	X			A	
8-8	Supports multiple pricing for items in charge master (e.g., AWP, AMP, WAC).	**O**	X			A	Currently AWP and Acquisition Cost.
8-9	Overriding price in order entry process is possible with appropriate authority.	**O**	X			A	Users with order entry privileges can override price.
8-10	Supports third party file format under latest NCPDP (National Council for Prescription Drug Programs) standards	**O**	X			A	

APPENDIX B
Technical Specifications
MDCH Facility Pharmacy System

Contractor's proposed solution complies with the technical requirements as follows:

1. *Check the box that applies to each requirement in the columns labeled:* ***Yes, Yes with Modifications, or No.***

    a. ***Yes*** *– is defined as the Contractor's solution complies with the requirement in all material respects.*

    In the ***comment box*** *the Contractor must describe how their proposed solution complies with the requirement in all material respects.*

    b. ***Yes with Modifications*** *– is defined as the solution does not currently comply with the requirement but the Contractor can modify the solution through configuration, programming or source code changes which, in the Contractor's opinion, would result in their solution reaching compliance with a requirement in all material respects.*

    In the ***comment box*** *the Contractor must describe the modification that can be made and how it will comply with the requirement in all material respects.*

    c. ***No*** *– is defined as the Contractor's proposed solution does not comply with the requirement in all material respects.*

    In the ***comment box*** *the Contractor must describe the impact of not meeting the requirement.*

2. *Fill in the column labeled* ***Requirement Response (REQ Response),*** *for each requirement with an* ***A, B, C, D or E*** *as defined below.*

    In the ***comment box*** *the Contractor must provide any additional information related to the solution.*

    A. *currently provided as a standard feature*
    B. *not currently provided but is a planned enhancement or will be added at no additional cost and will be supported in future releases*
    C. *not currently provided but will be added at the additional cost detailed in the cost proposal and will require additional cost to transfer to future releases*
    D. *not currently provided but will be added at the additional cost detailed in the cost proposal and will be supported in future releases at no additional cost*
    E. *not supportable*

ITEM NO.	TECHNICAL REQUIREMENTS	REQUIRED (R) OR OPTIONAL (0)	YES	YES WITH MODIFICATIONS	NO	REQ RESPONSE (A,B,C,D,E)	COMMENTS
1	**SYSTEM ARCHITECTURE**						
1-01	The system employs client/server or web-based architecture with an intelligent workstation client accessing a central database through software on a server.	**R**	**Y**			**A**	
1-02	The proposed system shall operate efficiently on PC system and also with MS Internet Explorer 5.x, or higher	**R**	**Y**			**A**	
1-03	The system places no limit on record size.	**O**	**Y**			**A**	
1-04	The software is expandable and portable, with specific reference to the system capacity requirements presented in this RFP.	**O**	**Y**			**A**	
1-05	The system is fully self-contained and capable of being operated by State staff with no dependency on Vendor services for its routine operation.	**R**	**Y**			**A**	
1-06	The system server is compatible with the State's technical architecture and is sized suitable for the system specified.	**R**	**Y**			**A**	Mediware's core system supports AIX 5.x, Solaris 8 and Windows Server operating environments. Sizing is determined based on facility information and database layout.
1-07	The system is an open system, with no dependency on the use of specific models or models of equipment operating systems.	**R**	**Y**			**A**	
1-08	The system is portable from one OS/RDBMS to another, i.e., from Unix to Windows 2000, or from one platform/OS to another, e.g., Sun Solaris to IBM AIX, etc.	**O**	**Y**			**A**	The database can be exported and moved to a different OS platform provided the OS is one of the environments set out in 1-06 above.
1-09	The system keeps a log of each transaction which alters the database. Logs are date and time stamped with usercode to allow the system to reconstruct activity for any	**R**	**Y**			**A**	

ITEM NO.	TECHNICAL REQUIREMENTS	REQUIRED (R) OR OPTIONAL (0)	YES	YES WITH MODIFICATIONS	NO	REQ RESPONSE (A,B,C,D,E)	COMMENTS
	period.						
2	**PROGRAMMING LANGUAGE**						
2-01	The system includes capability for Application Programming Interfaces (APIs) that enable the State to develop custom interfaces to all modules.	**R**	**Y**			**D**	The system is capable but no current APIs exist at this time.
3	**RDBMS / APPLICATIONS / DATABASE MANAGEMENT**						
3-01	The system is available with State's standard relational database management system	**R**		**Y/M**		**A**	The core WORx application utilizes IBM's Informix Dynamic Server RDBMS for transactional data management. Customers may extract WORx transactional data selectively or in full to any other RDBMS for further reporting and analytical processing.
3-02	Full-text indexing and a full-text database search feature are available to provide easy retrieval of records.	**R**	**Y**			**A**	
4	**SECURITY**						
4-01	All computer information systems and applications operate in a secure manner and comply with State Enterprise IT Security Policy and Procedures as found on the website: http://www.michigan.gov/dit/0,1607,7-139-34305-108216--,00.html	**R**	**Y**			**A**	
4-02	The system must ensure that the integrity and confidentiality of data is protected by safeguards to prevent release of information without proper consent.	**R**	**Y**			**A**	
4-03	System shall ensure a secure sign-on through user ID and password.	**R**	**Y**			**A**	
5	**SECURITY / ACCESS CONTROL**						
5-01	The system provides	**R**	**Y**			**A**	

ITEM NO.	TECHNICAL REQUIREMENTS	REQUIRED (R) OR OPTIONAL (0)	YES	YES WITH MODIFICATIONS	NO	REQ RESPONSE (A,B,C,D,E)	COMMENTS
	security at database, workstation, and individual operator levels						
5-02	The system provides secure access control based upon unique user login, for types of record (e.g., fund, order) as well as by function performed upon the record (e.g., Display, Add, Edit, Delete.)	**R**	**Y**			**A**	
5-03	The system checks each user's access privileges at login, and automatically disable or enables client functions (in real time) based upon the user's profile	**R**	**Y**			**A**	
5-04	The system provides varying levels of access within the application, such as administrators, view only, or scheduling only.	**R**	**Y**			**A**	
5-05	A means will exist for adding new roles and removing or disabling existing roles.	**R**	**Y**			**A**	
5-06	Multiple level administrators must be able to access an administrative page to view the Authorized Users of the system. This role must also need to include the ability to edit/add users to the system.	**R**	**Y**			**A**	
5-07	When users are removed, their accounts should be inactivated to preserve modification history (i.e., an audit trail).	**R**	**Y**			**A**	
6	**SECURITY/ACTIVITY LOGGING**						
6-01	The system logs unauthorized access attempts by date, time, user ID, device and location.	**R**	**Y**			**A**	The application logs successful access. Mediware's standard installation of Informix logs an unsuccessful access with user name and device name if available. Informix also provides an audit level which is not part of the standard

ITEM NO.	TECHNICAL REQUIREMENTS	REQUIRED (R) OR OPTIONAL (0)	YES	YES WITH MODIFICATIONS	NO	REQ RESPONSE (A,B,C,D,E)	COMMENTS
							installation due to the fact that this feature creates overhead performance costs when utilized. If the State desires, this non-standard installation can be performed whereby large amounts of audit information would be available.
6-02	The system maintains an audit trail of all application **security maintenance** performed by date, time, user ID, device and location, with easy access to information.	**R**			**N**	**E**	This is not a function at the Application level. This is handled at the OS.level.
6-03	Provides security reports of users and access levels.	**R**	**Y**			**A**	

ITEM NO.	TECHNICAL REQUIREMENTS	REQUIRED (R) OR OPTIONAL (0)	YES	YES WITH MODIFICATIONS	NO	REQ RESPONSE (A,B,C,D,E)	COMMENTS
7	**APPLICATION SPECIFICATIONS**						
7-01	The application uses SOM standard relational database management system.	**R**		**Y/M**		**A**	The core WORx application utilizes IBM's Informix Dynamic Server RDBMS for transactional data management. Customers may extract WORx data selectively or in full to any other RDBMS for further reporting and analytical processing.
7-02	The application will operate effectively on State hardware as defined by Vendor with Vendor-supplied upgrade recommendations.	**R**	**Y**			**A**	
7-03	The application allows the State, from PC workstations, to access and update all necessary information to complete a transaction.	**R**	**Y**			**A**	
7-04	The application allows for the accurate and timely input and extraction of State data.	**R**	**Y**			**A**	
7-05	The application provides a Graphical User Interface (GUI) that is user-friendly and provides data, calculation, reporting, and communication capabilities to State users as identified in this SOW.	**R**	**Y**			**A**	
7-06	The application is modular in design to accommodate phased implementation and future expansion.	**R**	**Y**			**A**	
7-07	All modules of the system are integrated and designed to work together using a single	**R**	**Y**			**A**	

ITEM NO.	TECHNICAL REQUIREMENTS	REQUIRED (R) OR OPTIONAL (0)	YES	YES WITH MODIFICATIONS	NO	REQ RESPONSE (A,B,C,D,E)	COMMENTS
	input and a common database with no redundant data entry or data storage.						
7-08	The system supports paperless processing through the use of electronic documents that are routed for electronic signatures through user-defined approval paths.	**R**	**Y**			**A**	The system supports paperless processing within the Medication Management Suite of products.
7-09	The system has the ability to accept batch entry from external sources while ensuring the same edits and validations as the online system.	**R**	**Y**			**A**	Mediware has included its clinician order entry module in our proposal.
7-10	Response times, at local and remote sites, for the major on-line processes stated above will meet or exceed the existing response times.	**R**	**Y**			**A**	There are numerous factors that affect response time. Mediware will work with the State of Michigan to determine the appropriate operating environment for optimal performance.
7-11	The application provides the capability of transferring data to and from the host/server to the client for processing on other software packages.	**R**	**Y**			**A**	
7-12	The system provides the capability to scan and access scanned images that are attached to various elements of the database.	**O**	**Y**			**A**	Images are not stored directly in the transactional RDBMS as BLOBs. However, URLs may be stored in various places in the system that reference images stored externally.
8	**REPORTING**						
8-01	The software delivers standard reports.	**R**	**Y**			**A**	
8-02	The system includes ad-hoc query and reporting tools.	**R**	**Y**			**A**	

ITEM NO.	TECHNICAL REQUIREMENTS	REQUIRED (R) OR OPTIONAL (0)	YES	YES WITH MODIFICATIONS	NO	REQ RESPONSE (A,B,C,D,E)	COMMENTS
8-03	The online query capability enables non-technical end-users to extract information.	**R**	**Y**			**A**	
8-04	The standard (e.g., regularly scheduled, recurring) reporting environment allows:	See Below					
8-04a	Standard reports to be scheduled, executed, viewed on-line, printed (centrally or remotely) and dispersed (including the use of report distribution management software)	**R**	**Y**			**A**	
8-04b	Offices and work locations to control which standard reports they do and do not receive.	**O**	**Y**			**A**	Reports can be configured to run for defined areas and units and sent to specific print locations.
8-04c	The State to control the information that appears on standard reports so that data security is maintained.	**R**	**Y**			**A**	Reports can be customized or the State can write custom reports.
8-05	The system provides methods for retaining and modifying previously built queries	**R**	**Y**			**A**	
8-06	The system provides security and control mechanisms that prevent the abuse of ad hoc queries (e.g., attempted access to restricted data, attempted execution of a query that would run for several hours, etc.)	**R**	**Y**			**A**	Application and underlying RDBMS security may be configured to restrict access to data and to restrict the ability to invoke long-running queries inappropriately.
8-07	The system provides the use of transaction databases, external files, or a "data warehouse" for ad-hoc reporting.	**O**		**Y/M**		**A**	The core WORx application utilizes IBM's Informix Dynamic Server RDBMS for transactional data management.

ITEM NO.	TECHNICAL REQUIREMENTS	REQUIRED (R) OR OPTIONAL (0)	YES	YES WITH MODIFICATIONS	NO	REQ RESPONSE (A,B,C,D,E)	COMMENTS
							Customers may extract WORx transactional data selectively or in full to any other RDBMS for further reporting and analytical processing.
8-08	The system provides support for XML, CSV, Excel, Access, and other helpful data download formats.	**R**	**Y**			**A**	
8-09	The system provides build your own comma separated values (.CSV) file" must be able to support large data sets.	**R**	**Y**			**A**	Export to a .CSV is available at the database level.
9	**EDIT AND VALIDATION CONTROL**						
9-01	The system includes comprehensive field edits to prevent incomplete or incorrect data from entering the system.	**R**	**Y**			**A**	
9-02	The system ensures data integrity and controls processing without hard-coded logic.	**R**	**Y**			**A**	
10	**INTERFACES**						
10-01	The system has the ability to exchange data with other systems using the following mechanisms: HL7 or ASCII	**R**	**Y**			**A**	
10-02	The system can provide real-time data transfer of data identified within this SOW.	**O**	**Y**			**A**	
10-03	System Interface: INFOSYS / Demographic - The State's Information System (INFOSYS). The INFOSYS is a mainframe application developed by MDIT which maintains the demographic	**R**	**Y**			**A**	Industry standard HL7 Interfaces have been quoted. Assuming these source systems can accommodate Standard HL7, there should not be an issue.

ITEM NO.	TECHNICAL REQUIREMENTS	REQUIRED (R) OR OPTIONAL (0)	YES	YES WITH MODIFICATIONS	NO	REQ RESPONSE (A,B,C,D,E)	COMMENTS
	information for the patients who reside in the state of Michigan mental health facilities. To identify the patient within the facility, each patient is assigned a unique case number. Vendor will be responsible for building an interface to load the patient demographic information. To make pharmaceutical decisions and report pharmacy transactions, pharmacists must accurately and securely track the demographic information for each patient. The system must provide the capability to load patient demographic information from the INFOSYS. The load process must provide the capability for both on-demand and scheduled loads						
10-04	System Interface: INFOSYS / Billing – The State's Information System (INFOSYS). The INFOSYS is a mainframe application developed by MDIT which maintains the activity transactions for the patients who reside in the state of Michigan mental health facilities. To identify the patient within the facility, each patient is assigned a unique case number (Note: This case number is the same case number identified in 10-03). Vendor will be responsible for	**R**	**Y**			**A**	Industry standard HL7 Interfaces have been quoted. Assuming these source systems can accommodate Standard HL7, there should not be an issue.

ITEM NO.	TECHNICAL REQUIREMENTS	REQUIRED (R) OR OPTIONAL (0)	YES	YES WITH MODIFICATIONS	NO	REQ RESPONSE (A,B,C,D,E)	COMMENTS
	building an interface to feed the patient pharmaceutical activity into the INFOSYS. To accurately record and bill, the INFOSYS maintains all activity services provided to the patient, including pharmaceutical services. The new system must provide on-demand capability to feed the pharmaceutical transactions that occurred for all patients for a specific date range into the INFOSYS						
10-05	Supports interface with Michigan Board of Pharmacy's Michigan Automated Prescription Services (MAPS) system re medication orders by order type (e.g., controlled substances reporting). American Society For Automation in Pharmacy (ASAP 2005) file format.	**O**	**Y**			**A**	The system supports ASAP 2005 reporting.
10-06	System Interface - AmerisourceBergen ECHO System - Electronic order entry system for automatic updates to inventory with order receipt.	**R**	**Y**			**A**	
10-07	System Interface - Guaranteed Returns Interface File: Interface for reconciliation of Returned Drugs with records of contracted Returned Goods processor; minimally to reconcile inventory when expired/damaged drugs are returned.	**R**		**Y/M**		**B**	Mediware provides a comprehensive set of configurable interface transactions that may be invoked through industry-standard HL-7 message formats.
11	**USER INTERFACES:**						

ITEM NO.	TECHNICAL REQUIREMENTS	REQUIRED (R) OR OPTIONAL (0)	YES	YES WITH MODIFICATIONS	NO	REQ RESPONSE (A,B,C,D,E)	COMMENTS
11-01	In general, the user interface should reduce redundancy and extra keystrokes (e.g., if physical address and mailing address are the same, the user should not be required to type it in twice. The system should not allow non-numeric characters when entering phone/fax numbers).	**R**	**Y**			**A**	
11-02	Users must be able to access the system 24/7/365.	**R**	**Y**			**A**	
11-03	When the user logs in for the first time, system must be able to recognize the type of user and the system should direct the user to the appropriate page based on the role of the user, where user will be asked to change the password and update the profile.	**R**	**Y**			**A**	On UNIX-based systems, this is available. Windows-based systems manage this at the domain level and not via the application.
11-04	Every time a user logs in, system should recognize the user's role and direct the user to the appropriate home page based on the role.	**R**	**Y**			**A**	
11-05	System must allow the user to access and edit information based on the role. No user should be allowed to Delete any information but can Add or update. Certain Changes made by certain user will have to be approved by the Supervisor/super user.	**R**	**Y**			**A**	
12	**CAPACITY**						
12-01	Current requirement lists 1,000 identified users. It is estimated that we will need between 200 and 400 concurrent users	**R**	**Y**			**A**	

ITEM NO.	TECHNICAL REQUIREMENTS	REQUIRED (R) OR OPTIONAL (0)	YES	YES WITH MODIFICATIONS	NO	REQ RESPONSE (A,B,C,D,E)	COMMENTS
	capacity.						
13	**SYSTEM AUDITING**						
13-01	The system has the ability to maintain and access a historical record of all changes made to any item within the system (e.g., data element, business rule, process control, software program), the ID of the person that made the change, the before and after images of the affected data records, and the date and time the change was made.	**R**	**Y**			**A**	
13-02	The system must ensure that all system events for software, hardware, interfaces, operating system, network, etc. are written to a system event log in a manner that facilitates debugging of all system problems.	**R**	**Y**			**A**	
13-03	The system offers the ability to query, view, filter, and sort the system audit trail. The system is able to store the queries.	**R**	**Y**			**A**	
13-04	The system has the ability to identify and track data back to its input source (e.g., imaged document, keyed from form, interface file, etc.).	**O**	**Y**			**A**	
13-05	The system has the ability to audit all override of edits and audits and identify the login ID, date, and time.	**R**	**Y**			**A**	
14	**SYSTEM ERROR HANDLING**						
14-01	The system must ensure that all errors are written to an error log.	**R**	**Y**			**A**	
14-02	The system must allow for an administrator to	**R**	**Y**			**A**	

ITEM NO.	TECHNICAL REQUIREMENTS	REQUIRED (R) OR OPTIONAL (0)	YES	YES WITH MODIFICATIONS	NO	REQ RESPONSE (A,B,C,D,E)	COMMENTS
	view, filter, sort, and search the error log.						
14-03	The system must allow for an administrator to archive error log entries based upon user-defined criteria.	**R**	**Y**			**A**	
15	**BACKUP AND RECOVERY**						
15-01	The system has the ability to provide point-in-time recovery of data to the last completed transaction.	**R**	**Y**			**A**	
15-02	The system has the ability to allow for continued use of the system during backup.	**O**	**Y**			**A**	
15-03	The system has the ability to provide a complete backup and recovery process for all database tables and system files.	**R**	**Y**			**A**	
15-04	The system has the ability to create on request backups.	**O**	**Y**			**A**	
15-05	The back up and archival features of the system proposed can be initiated automatically or by manual request.	**O**	**Y**			**A**	
15-06	The system software and data must be able to be restored to its previous operational status within four (4) hours after initiation of recovery process.	**R**	**Y**			**A**	
16	**ADDITIONAL**						
16-01	State may have ability to modify Interface source code .	**O**			**N**	**E**	The interfaces can be configured but source code will not be made available for modification.
16-02	For the first year and all subsequent Contract years, the following services are provided for the current version and one previous version of any Software provided with the	See Below					

ITEM NO.	TECHNICAL REQUIREMENTS	REQUIRED (R) OR OPTIONAL (0)	YES	YES WITH MODIFICATIONS	NO	REQ RESPONSE (A,B,C,D,E)	COMMENTS
	deliverables, commencing upon installation of the deliverables or delivery of the Software:						
16-02a	Error Correction. Upon notice by the State of a problem with the Software (which problem can be verified), reasonable efforts to correct or provide a working solution for the problem.	**R**	**Y**			**A**	
16-02b	Material Defects. The State will be notified of any material errors or defects in the deliverables known, or made known to the Contractor from any source during the Contract term that could cause the production of inaccurate, or otherwise materially incorrect, results and shall initiate actions as may be commercially necessary or proper to effect corrections of any such errors or defects.	**R**	**Y**			**A**	
16-02c	Updates. All new releases and bug fixes for any software deliverable developed or published by the contractor and made available to its other customers at no additional charge will be provided to the State at no additional charge.	**R**	**Y**			**A**	

Enterprise Architecture Solution Assessment	
Contact Info & Purpose (vendor version)	
The purpose of the EA Solution Assessment is to document architectural details of proposed IT solutions in order to determine compatibility with the overall SOM architecture. MDIT/SOM activities which require an Assessment include: the purchase of new licenses, contracting for development services, purchase of new software components, installation of new software components, the purchase of new hardware components or the use of MDIT staff resources on any project beyond the design phase. All vendor proposals and new contracts must be accompanied by an Assessment, documenting the architectural details of the proposed solution.	
Vendor Version 2.04v	
Solution/Project Name	<to be completed by SOM prior to inclusion in RFP>
RFP Name/Number	
Date Submitted	
Vendor Name	
Vendor City and State	
Vendor Phone No.	
Vendor eMail	
A brief description of the proposed solution and business purpose/process. *(please keep the description brief)*	<to be completed by SOM prior to inclusion in RFP>
Additional description of the solution and business purpose. *(please expand the row as much as needed)*	Mediware Information Systems provides a ClosedLoop approach for medication management that unites patient record-centric applications built on a single medication database. The result is safety, accuracy and efficiency that exceed the capabilities of interfaced solutions and a truly closed loop environment that connects each component of the medication process. Further, because of the use of widely accepted data standards, Mediware has accomplished stable interfacing expertise to communicate with external clinical systems for documentation and data sharing. **Mediware's ClosedLoop Medication Management** Within the Mediware suite, patient medication orders are seamlessly managed throughout the medication use process: 1. Upon admission, a nurse may access patient profiles from industry leading pharmacy databases to create a current medication list which can be verified with the patient or a family member. During medication reconciliation, the clinician may review the patient's allergies and demographic information. 2. The physician then places medication orders via a computerized order entry system (MediCOE) directly to the pharmacy system for review. MediCOE eliminates errors associated with handwritten orders and expedites timely order fulfillment. 3. Using the pharmacy information system, the pharmacist enters or reviews orders, checks for interactions and defines alerts. 4. The order is passed along to guide the nurse through medication administration using barcode-enabled patient and medication identification for five rights verification (MediMAR). 5. Medication charting, including pain scale assessment, occurs automatically as a byproduct of administration. The Mediware approach ensures that all patient record-centric systems leverage a *single* database. Using computers, handhelds and wireless devices, each caregiver is updated in real time to the status of each patient order. If orders change or an alert is issued, all caregivers know instantly and can adjust before an adverse event occurs. Integrated tools—from physician ordering, to the pharmacy review, to

	bedside administration—eliminate common medication errors and deliver meaningful results toward patient safety. **Interfaced Documentation & Data Sharing** To facilitate clinician workflow, the Mediware system interfaces with broader facility systems such as admissions, nursing documentation, billing, and electronic medical records. With great success, Mediware is able to integrate with core systems to share patient data gathered during therapies including vital signs, medication administrations, and patient outcomes. Advanced context sharing even allows Mediware clients to access medication administration information from within their core documentation system and obtain real-time laboratory results crucial during medication administration. Hospitals looking to improve their medication use processes are wise to examine the strengths and challenges of best-of-breed solutions such as that proposed by Mediware Information Systems. Hospitals are often persuaded to choose integrated solutions by "single-source" vendors that claim "we can do that" for department-specific information systems. But, development takes time and delayed promises may hurt ROI and have negative cultural impact on users. Other hospitals gravitate toward a best-of-breed strategy to satisfy each department's specific needs relying heavily on webs of dynamic interfaces. In the midst of the "integrate vs. interface" debate, a compromise solution has surfaced in a hybrid approach comprised of best of suite systems linked to support technologies outside their core competency. Best-of-suite solutions like Mediware's medication management system have been proven to coexist peacefully as powerful extensions to other vendor's HIS systems while delivering exceptional medication management expertise. With the integration of core loop medication management technologies and interfacing to support systems, Mediware delivers a best-of-all-worlds solution for patient safety and caregiver confidence. With proven capabilities and a rapid implementation model, hospitals finally have a viable alternative to risky clinical transformation programs that may span the better part of a decade.

Select all that apply ✓	Enterprise Architecture Solution Assessment	
	Architecture Overview (vendor version)	
	***Bidder**: please provide a response to each technology category*	
1	***Hosting***	***Comments***
✓	Internally Hosted	
	Externally Hosted	
	Internally & Externally Hosted	
	N/A (Not Applicable)	
2	***User Interface Type***	***Comments***
✓	Browser	MediCOE / MediMAR / MediREC are Web-based applications
✓	Client	WORx and WORx PO are client server applications
✓	Mobile Browser	MediMAR is compatible with Mobile IE
	Mobile Client	
	Terminal	
	Other	
	N/A (Not Applicable)	
3	***System Interface Type***	***Comments***
	EDI	
✓	Flat File	
	Web Service	
	XML	
✓	Other	HL7 Standard
	N/A (Not Applicable)	
4	***Type of System Integration***	***Comments***
	Internal	
	External	
✓	Both Internal & External	The modules comprising the Medication Management Suite are internally integrated; external integration is necessary to connect to the State's ADT, Billing, etc.
	N/A (Not Applicable)	
5	***Method of Access***	***Comments***
✓	Internet	
✓	Intranet	
	LG Net	
	Public facing internet	
	UT Net	
	VendorNet	
	VPN	
✓	Other	Mediware support team will gain access through Enexity SecureLink.
	N/A (Not Applicable)	
	(continued)	

Select all that apply ✓	Enterprise Architecture Solution Assessment	
	Architecture Overview (continued)	
	***Bidder**: please provide a response to each technology category*	
6	***Data Audit Trail Implementation***	***Comments***
✓	Application Code	The application maintains specific internal audit of various changes to patient/order information.
	Database Audit Files	
✓	Database Triggers	
✓	Stored Procedures	
	Other	
	N/A (Not Applicable)	
7	***Development Language***	***Comments***
✓	.NET Framework 1.1 (standard)	
✓	.NET Framework 2.x (standard)	
✓	ASP.NET 1.1 (standard)	
✓	ASP.NET 2.x (standard)	
	Java (JDK) 1.4 (standard)	
	JavaScript (standard)	
	MS Visual Basic 2003 (VB) (standard)	
	MS Visual Basic 2005 (VB) (standard)	
✓	MS Visual C# 2003 (standard)	
✓	MS Visual C# 2005 (standard)	
	MS Visual C++ 2003 (standard)	
	MS Visual C++ 2005 (standard)	
	Oracle Forms 10g (standard)	
	Oracle PL/SQL 10g (standard)	
	PHP 4.x (standard)	
	PHP 5.x (standard)	
	XHTML 1.0 (standard)	
	XML/XSLT (standard)	
✓	Other (Explain)	PowerBuilder, Perl
	N/A (Not Applicable)	
8	***Database***	***Comments***
	DB2 8.x (standard)	
	MS SQL Server 2005 (standard)	
	Oracle 10g (standard)	
	TeraData A28V2R6.1 (standard)	
✓	Other (Explain)	The system utilizes IBM's Informix RDBMS.
	N/A (Not Applicable)	

(continued)

Select all that apply ✓	Enterprise Architecture Solution Assessment	
	Architecture Overview (continued)	
	***Bidder**: please provide a response to each technology category*	
9	***Database Modeling Tools***	***Comments***
	Rational Rose Data Model 7.0 (standard)	
✓	Erwin 7.0 (standard)	
	Oracle Designer 10g (standard)	
	Toad 8.x (standard)	
	Toad 9.0 (standard)	
	Other (Explain)	
	N/A (Not Applicable)	
10	***Development Platform***	***Comments***
✓	.Net (standard)	
	Java J2EE (standard)	
	Oracle (standard)	
✓	Other (Explain)	Power Builder
	N/A (Not Applicable)	
11	***Presentation (Web) Server***	***Comments***
	Apache HTTPD 2.2.x (standard)	
	Citrix 4.0 (standard)	
	IBM IHS 6.0 (standard)	
	IBM IHS 6.1 (standard)	
✓	Microsoft IIS 6.0 (standard)	
	Sun ONE Web Server (standard)	
	Other (Explain)	
	N/A (Not Applicable)	
12	***Application Server***	***Comments***
	IBM WebSphere 6.0 (standard)	
	IBM WebSphere 6.1 (standard)	
	JBoss 4.0.x (standard)	
✓	Microsoft IIS 6.0 (standard)	Web apps will use MSIIS
✓	Other (Explain)	Client is installed on Workstations
	N/A (Not Applicable)	
13	***HW Platform***	***Comments***
✓	Dell (standard)	
✓	HP (standard)	
✓	IBM AIX (standard)	
✓	Sun (standard)	Solaris
	Other (Explain)	
	X86 Virtualization (VCoE) (standard)	
	N/A (Not Applicable)	

(continued)

Select all that apply ✓	Enterprise Architecture Solution Assessment	
	Architecture Overview (continued)	
	***Bidder**: please provide a response to each technology category*	
14	***Server OS***	***Comments***
✓	AIX 5.3 (standard)	
	HPUX 11i (standard)	
	HPUX 11i v2 (standard)	
✓	Microsoft Windows 2003 (standard)	
	Novell Netware 6.5 (standard)	
	Redhat Linux Enterprise Server 3.0 (standard)	
✓	Sun Solaris 10 (standard)	
✓	Sun Solaris 9 (standard)	
	Suse Linux Enterprise 10 (standard)	
	Other (Explain)	
	N/A (Not Applicable)	
15	***CRM***	***Comments***
	Siebel (standard)	
✓	Other (Explain)	Soffront
	N/A (Not Applicable)	
16	***Document Management***	***Comments***
	Filenet (standard)	
	Vignette Application Portal (standard)	
	Vignette V7 (standard)	
	Other (Explain)	
✓	N/A (Not Applicable)	
17	***Centralized Printing***	***Comments***
	DMB consolidated print center (standard)	
✓	Other (Explain)	Printing from application server
	N/A (Not Applicable)	
18	***Fax Server***	***Comments***
	GW Fax	
	Other (Explain)	
✓	N/A (Not Applicable)	
19	***Testing Tools***	***Comments***
	Compuware Vantageview 8.5 (standard)	
	Mercury Quality Center 8.2 (standard)	
	Rational Suite 7 (standard)	
✓	Other (Explain)	Boreland Silk Test
	N/A (Not Applicable)	

(continued)

Select all that apply ✓	Enterprise Architecture Solution Assessment Architecture Overview (continued) ***Bidder**: please provide a response to each technology category*	
20	***Identity Management***	***Comments***
✓	Active Directory 2003 (standard)	
	e-Dir 8.7.3.9 (standard)	
	Tivoli Access Manager v4.1 (standard)	
	Tivoli Identity manager 4.5.1 (standard)	
	Other (Explain)	
	N/A (Not Applicable)	
21	***Project Management***	***Comments***
	Clarity 8 (standard)	
✓	MS Project 2003 (standard)	
	Rational 7.0 (standard)	
	Niku 6 (standard)	
	Other (Explain)	
	N/A (Not Applicable)	
22	***Requirements Gathering***	***Comments***
	Rational Requisit Pro 7.0 (standard)	
	Serena RTM 5.6 (standard)	
✓	MS Office (XP/2003) including Visio (standard)	
	SUITE/SEM templates	
✓	Other (Explain)	Boreland Caliber
	N/A (Not Applicable)	
23	***Design Tools***	***Comments***
	Rational Rose 7.0 (standard)	
✓	Visio 2003 (standard)	
✓	Other (Explain)	Boreland DefineIT
	N/A (Not Applicable)	
24	***Version Control***	***Comments***
	Rational Clear Case 7 (standard)	
	Subversion 1.4 (standard)	
✓	Other (Explain)	MS Team Foundation Server
	N/A (Not Applicable)	
25	***Message Queuing***	***Comments***
	Websphere MQ 6.x (standard)	
	Other (Explain)	
✓	N/A (Not Applicable)	

(continued)

Select all that apply ✓	Enterprise Architecture Solution Assessment Architecture Overview (continued) ***Bidder**: please provide a response to each technology category*	
26	***Business Integration***	***Comments***
	BizTalk 2006 (standard)	
	Websphere Message Broker 6.0 (standard)	
	Other (Explain)	
✓	N/A (Not Applicable)	
27	***Database Tools***	***Comments***
	MS SQL Server Enterprise Manager (standard)	
	Oracle Enterprise Manager 10g (standard)	
	Teradata Utilities 5380 (standard)	
	Teradata Utilities 5450 (standard)	
	Toad 8.x (standard)	
	Toad 9.0 (standard)	
✓	Other (Explain)	IBM's Informix RDBMS tools
	N/A (Not Applicable)	
28	***Reporting Tools***	***Comments***
	ActivePDF (standard)	
	ActiveReports 1.0 (standard)	
	ActiveReports 2.0 (standard)	
	Crystal Reports 10 (standard)	
✓	Crystal Reports 11 (standard)	Utilized for MediMAR, MediCOE and MediREC
	Jasper Reports (standard)	
	MS SQL 2005 Reporting Services (standard)	
	Oracle Reports 10g (standard)	
✓	Other (Explain)	Utilize InfoMaker and SQR Server for WORx
	N/A (Not Applicable)	
29	***End-User Tools***	***Comments***
	Business Objects (BO) 10 (standard)	
	Business Objects (BO) 11 (standard)	
	Oracle Discoverer 10g (standard)	
	Other (Explain)	
✓	N/A (Not Applicable)	Crystal Reports can be used but is not supplied by Mediware
30	***Deployment Tools***	***Comments***
	Serena Mover (standard)	
✓	Microsoft Visual Studio (standard)	
	Other (Explain)	
	N/A (Not Applicable)	

(continued)

APPENDIX C-1
EA Assessment
MDCH Facility Pharmacy System

Select all that apply ✓	Enterprise Architecture Solution Assessment	
	Architecture Overview (continued)	
	***Bidder**: please provide a response to each technology category*	
31	***Build Tools***	***Comments***
	Apache Ant 1.7 (standard)	
	Serena Changeman Builder (standard)	
✓	MS Visual Studio (standard)	
✓	Other (Explain)	MS Build, Cruise Control
	N/A (Not Applicable)	
32	***Job Schedulers***	***Comments***
	Tidal Enterprise Scheduler 3.0 (standard)	
	OpCon XPS ver 3.31.02 (standard)	
	BL/Sched ver 5.0 (standard)	
	ECS ver 5.5 (standard)	
	HAPS ver 1.7 (standard)	
	Zeke ver 5.3.1 (standard)	
✓	Other (Explain)	Arcana Scheduler
	N/A (Not Applicable)	
33	***GIS Technologies***	***Comments***
	ArcIMS (standard)	
	ArcGIS Server 9.2 (standard)	
	ArcGIS Engine (standard)	
	ArcSDE (standard)	
	Other (Explain)	
✓	N/A (Not Applicable)	
34	**Centers of Excellence Services**	**Comments**
	Address Verification Service (standard)	
	Business Objects Reporting Service (standard)	
	Citrix Application Delivery (standard)	
	Extract Transform Load (ETL) (standard)	
✓	N/A (Not Applicable)	

Enterprise Architecture Solution Assessment	
Disaster Planning (Section to be completed by SOM)	
Business continuity requirements.	**Describe below**
The business requirement(s) that determine the amount of time and the operational availability of the application to the end-user.	<to be completed by SOM prior to inclusion in RFP>

Select Only One (1)	***Availability Requirement Category – Availability Requirement is divided into three different levels. These levels define the continuous service availability requirements of the application. Based on the following definitions, please indicate the level of availability required for this Business Function / Application.***
<SOM>	***Urgent*** *- Business Function / Application outage has potential to cause loss of life or risk of injury to a citizen. 99.99% availability (<45 minutes of downtime / month). If an Urgent priority application is not available, DIT will work to resolve the incident 7 x 24 x 365. If the incident occurs after normal business hours, on-call staff (where available) will be called in to resolve the incident. DIT staff will continue to work the issue during and after business hours until the incident is resolved, and the application service restored.*
<SOM>	***High*** *– Business Function / Application outage will have a high non-life threatening impact on the public. If this application is not available, there may be an adverse impact on a large number of business clients who use the application. The lack of application availability may also be considered politically sensitive. 99.5% availability (<3.5 hours of downtime / month). DIT will work to resolve the incident 7 x 24 x 365. If the incident occurs after normal business hours, on-call staff (where available) will be called in to resolve the incident. DIT staff will continue to work the issue during and after business hours until the incident is resolved, and the application service restored.*
<SOM>	***Medium*** *– Business Function / Application not meeting the Urgent or High criteria will be assigned Medium priority status; this default will be considered the third priority and reflect a situation where there is no risk of personal injury, and the public is not being directly effected. 98% availability (<15 hours of downtime / month). If there is an issue with a medium priority application, work to resolve the incident will be handled during normal DIT Business hours (typically 8:00 am-5:00 pm, Monday-Friday. If the problem is not resolved at the end of the business day, staff will return to work the next business day, and continue the resolution process until the service is restored*

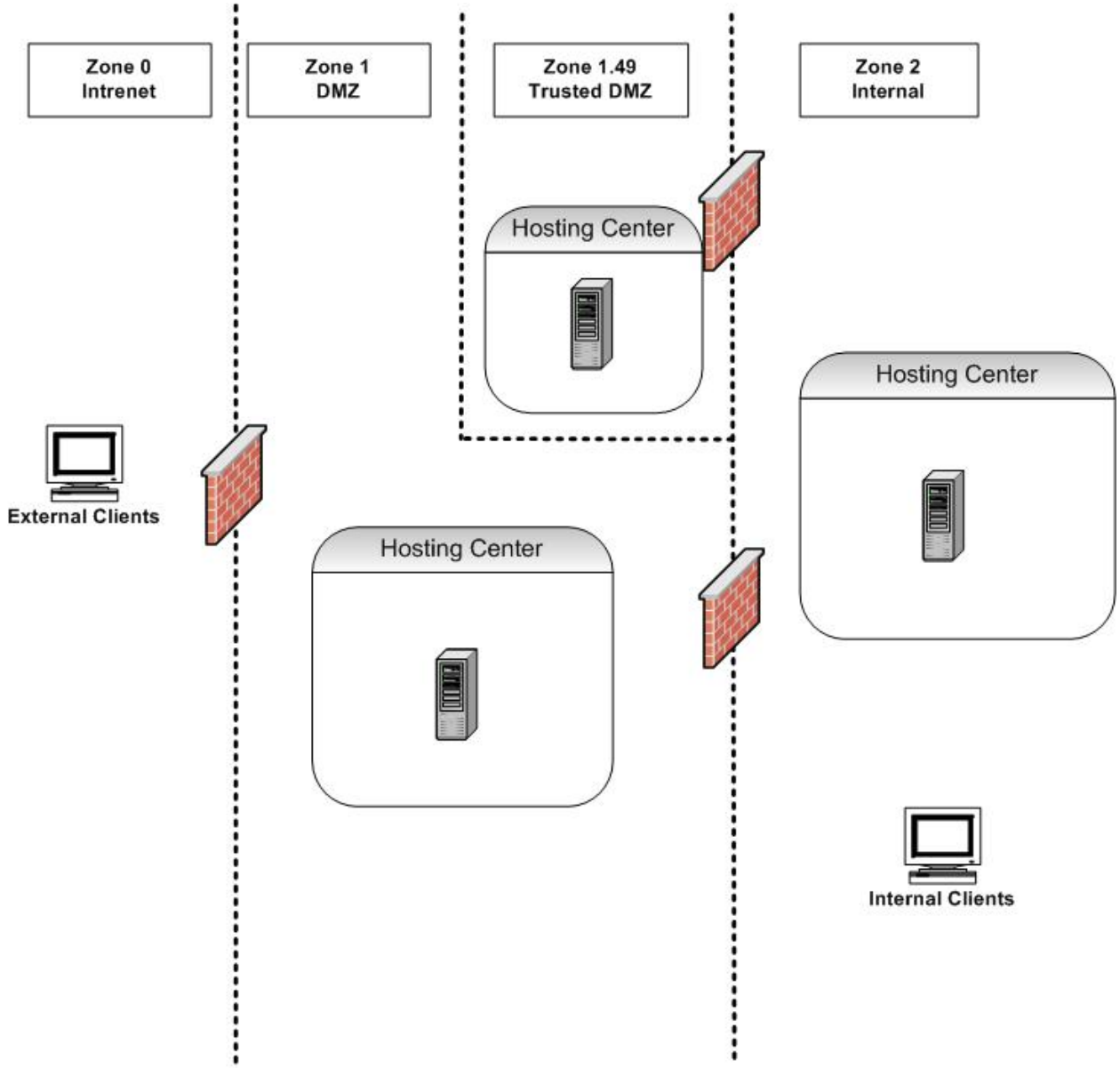
Recovery Point and Time Objectives

Select Only One (1)	***Recovery Point Objective (RPO) is the maximum amount of data loss a business function can sustain during an event.***		***Select Only One (1)***	***Recovery Time Objective (RTO) is the maximum amount of time that can elapse until a system / application / function must be returned to service.***
	2 hours			2 hours
<SOM>	4 hours		**<SOM>**	4 hours
	6 hours			6 hours
	8 hours			8 hours
	24 hours			24 hours
	72 hours			72 hours
	Other (Explain)			Other (Explain)
	N/A (Not Applicable)			N/A (Not Applicable)

Enterprise Architecture Solution Assessment

Server/Network Diagram (vendor version)

Diagrams are useful to illustrate the interaction of technologies. The "Server/Network Diagram" is intended to allow the EA (Enterprise Architecture) Core Team to understand the relationship between the system components. Below is an example illustrating the network components deemed necessary. Vendors may use their own format so long as adequate information is conveyed.



State of Michigan Network Diagram Example
Network example only
To be completed by vendor

Exceptions as included on EA Assessment and

- Toolkits(2)
- HP Proliant DL 380 – Add hard disk space (additional drives) for enhanced RAID config
- Webserver(1 prod)
- HP Proliant DL 560 – Add hard disk space (additional drives) for enhanced RAID config
- Database server(1 prod)*
- HP Proliant DL 560 – Add CPU (minimum 2) RAM (minimum 2), hard disk (2X36 mirrored for OS or 4X36 in RAID5, plus total 6X73GB in RAID 5 for datastore), tape backup, DVD

  *preferable configuration for 64-bit processing

File Name: Patient Information Transfer File	File Number:

Remarks:

Standard Format Key:

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Example: 9(07)v999 represents 9999999999 with an implied decimal point between the 7th and 8th digit from the right.

LJ – Left Justified, pad on right with trailing spaces

(MMDDYYYY) - Date format of two digit month, two digit day and four digit year

Format: s$$$$$$cc – Signed Numeric , sign is internal and trailing, zero always positive, always right justified, zero filled dollar-cents amount with 2 positions to the right of the implied decimal point, all other positions to the left of the implied decimal point and when used for dollar fields, have default values of zero

DE#	Data Element Description	Format	Standard Formats	Field Length	Special Instruction
1	Agency Number – Four digit number assigned to the agency	9(04)	N	4	Format: 9999
2	Case Number – Six digit number assigned to the customer by the agency	9(06)	N	6	Format: 999999
3	Patient Name – First and Last name of the patient along with the middle initial	X(30)	LJ		Format: Last First Middle Initial
4	Patient Gender Code - Code indicating the gender of the individual.	X(01)		1	Ø=Not Specified 1=Male 2=Female
5	Patient Date of Birth – Date of birth of patient.	9(08)	(MMDDYYYY)	8	
	Patient Date of Death – The date the patient died	9(08)	(MMDDYYYY)	8	
6	Admission Date – Date the patient was originally admitted into the facility	9(08)	(MMDDYYYY)	8	
7	Discharge Date – Date the patient was discharged from the facility	9(08)	(MMDDYYYY)	8	
8	Location – The Cost Center code representing the location in which the patient resides	X(06)	LJ	6	
9	Social Security Number – The social security number of the patient	X(09)	LJ	9	
10	Patient Address Line 1 – The first line of the patient's address	X(30)	LJ	30	
11	Patient Address Line 2 – The second line of the patient's address	X(30)	LJ	30	

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DE#	Data Element Description	Format	Standard Formats	Field Length	Special Instruction
12	Patient City – The city of the patient's home address	X(30)	LJ	30	
13	Patient State – The two character postal state code of the patient's home address.	X(02)	LJ	2	
14	Patient Zip Code – The nine digit zip code of the patient's home address.	X(09)	LJ	9	Format: 999999999
15	Patient County Code – The two digit county identifying the county of the patient's home	9(02)	RJ	2	
16	Patient Phone Number – The home phone number of the patient.	9(10)	Fixed	10	Format: 9999999999
17	Previous State Agency – The four digit number assigned to the previous state facility the patient was admitted to	9(04)	RJ	4	
18	Previous State Agency Admission Date – The date the patient was admitted into the	9(08)	(MMDDCCYY)	8	
19	Previous State Agency Discharge Date – The date the patient was discharged from the	9(08)	(MMDDCCYY)	8	
20	Patient Ethnicity – The ethnicity of the patient	X(01)	LJ	1	
21	Diagnosis Type Qualifier – Qualifier of the type of diagnosis codes being supplied	X(02)	LJ	2	Blank = Not Specified 01 = International Classification of Diseases (ICD9) 2 = International Classification of Diseases (ICD10)
22	Primary Diagnosis – The primary diagnosis of the patient at the time the patient was admitted into the facility	X(06)	LJ	6	Comments: ICD diagnosis reported without decimal using
23	Secondary Diagnosis – The secondary diagnosis of the patient at the time the patient was admitted into the facility	X(06)	LJ	6	Comments: ICD diagnosis reported without decimal using
24	Diagnosis 3 – The third diagnosis of the patient at the time the patient was admitted into the facility	X(06)	LJ	6	Comments: ICD diagnosis reported without decimal using

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DE#	Data Element Description	Format	Standard Formats	Field Length	Special Instruction
25	Diagnosis 4 – The fourth diagnosis of the patient at the time the patient was admitted into the facility	X(06)	LJ	6	Comments: ICD diagnosis reported without decimal using standard reporting convention.
26	Diagnosis 5 – The fifth diagnosis of the patient at the time the patient was admitted into the facility	X(06)	LJ	6	Comments: ICD diagnosis reported without decimal using standard reporting convention.
26	Diagnosis 6 – The sixth diagnosis of the patient at the time the patient was admitted into the facility	X(06)	LJ	6	Comments: ICD diagnosis reported without decimal using standard reporting convention.
27	Diagnosis 7 – The seventh diagnosis of the patient at the time the patient was admitted into the facility	X(06)	LJ	6	Comments: ICD diagnosis reported without decimal using standard reporting convention.
28	Diagnosis 8 – The eighth diagnosis of the patient at the time the patient was admitted into the facility	X(06)	LJ	6	Comments: ICD diagnosis reported without decimal using standard reporting convention.
29	Diagnosis 9 – The ninth diagnosis of the patient at the time the patient was admitted into the facility	X(06)	LJ	6	Comments: ICD diagnosis reported without decimal using standard reporting convention.

n:	**Request Number:**
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DE#	Data Element Description	Format	Standard Formats	Field Length	Special Instruction
1	Agency Number – Four digit number assigned to	9(04)	N	4	Format: 9999
2	Case Number – Six digit number assigned to the	9(06)	N	6	Format: 999999
3	Patient Name – First and Last name of the patient	X(30)	LJ		
4	Order Number –Number assigned by pharmacy system to identify the	9(08)	N	8	Format: 99999999
5	Activity Date – Dispensing date	9(08)	(MMDDYYYY)	8	
6	National Drug Code – The national standard drug code, formatted in the eleven digit standard format without dashes.	X(11)	LJ	11	Comments: When reporting Compound ingredients (Compound Code = 2), this field represents the National Drug code of the ingredient being dispensed for the compound.
7	Drug Name – The name of the drug being dispensed	X(50)	LJ	50	
8	Adjustment Indicator – Field to identify the record as a new add or an	9(01)		1	1 = Credit 0 = Charge
9	Prescription Number – Reference number assigned by the provider	9(07)	N	7	
10	Date Prescription Written – The date in which the prescription was written	9(08)	(MMDDYYYY)	8	
11	Associated Prescription Number – Related prescription reference number to which the	9(07)	N	7	

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DE#	Data Element Description	Format	Standard Formats	Field Length	Special Instruction
12	Associated Prescription Date – Date of the Associated prescription	9(08)	(MMDDYYYY)	8	
13	Scheduled Prescription ID Number – The serial number of the prescription	X(12)	LJ	12	

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DE#	Data Element Description	Format	Standard Formats	Field Length	Special Instruction
14	Submission Clarification Code – Code indicating that the pharmacist is clarifying the submission	9(02)	N	2	Ø=Not Specified, Default 1=No Override 2=Other Override 3=Vacation Supply-The pharmacist is indicating that the cardholder has requested a vacation supply of the medicine. 4=Lost Prescription-The pharmacist is indicating that the cardholder has requested a replacement of medication that has been lost. 5=Therapy Change-The pharmacist is indicating that the physician has determined that a change in therapy was required; either that the medication was used faster than expected, or a different dosage form is needed, etc. 6=Starter Dose-The pharmacist is indicating that the previous medication was a starter dose and now additional medication is needed to continue treatment. 7=Medically Necessary-The pharmacist is indicating that this medication has been determined by the physician to be medically necessary 8=Process Compound For Approved Ingredients 9=Encounters 99=Other
15	Originally Prescribed Product – National Drug Code of the initially	X(11)	LJ	11	See National Drug Code for formatting instructions

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DE#	Data Element Description	Format	Standard Formats	Field Length	Special Instruction
16	Originally Prescribed Quantity - Product initially prescribed amount expressed in metric decimal units	9(07)v999	N	10	Format: 9999999.999
17	Doses – The number of doses of the drug dispensed	9(04)	N	4	Format: 9999
18	Unit Dose Indicator - Code indicating the type of unit dose dispensing.	9(01)		1	Ø=Not Specified 1=Not Unit Dose 2=Manufacturer Unit Dose 3=Pharmacy Unit Dose
19	Quantity Prescribed - Amount expressed in metric decimal units.	9(07)v999	N	10	Format=9999999.999
20	Unit of Measure - NCPDP standard product billing codes.	X(02)	LJ	2	EA=Each GM=Grams ML=Milliliters Comments: When reporting Compound ingredients (Compound Code = 2), this field represents the NCPDP standard product billing code for the complete compound mixture.

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DE#	Data Element Description	Format	Standard Formats	Field Length	Special Instruction
21	Dosage Form - Dosage form of the ingredient being dispensed.	X(02)		2	Blank=Not Specified Ø1=Capsule Ø2=Ointment Ø3=Cream Ø4=Suppository Ø5=Powder Ø6=Emulsion Ø7=Liquid 1Ø=Tablet 11=Solution 12=Suspension 13=Lotion 14=Shampoo 15=Elixir 16=Syrup 17=Lozenge 18=Enema Comments: When reporting Compound ingredients (Compound Code = 2), this field represents the dosage form for the complete compound mixture.

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DE#	Data Element Description	Format	Standard Formats	Field Length	Special Instruction
22	Route of Administration - Code for the route of administration of the ingredient being dispensed.	9(02)	N	2	Ø=Not Specified 1=Buccal 2=Dental 3=Inhalation 4=Injection 5=Intraperitoneal 6=Irrigation 7=Mouth/Throat 8=Mucous Membrane 9=Nasal 1Ø=Ophthalmic 11=Oral 12=Other/Miscellaneous 13=Otic 14=Perfusion 15=Rectal 16=Sublingual 17=Topical 18=Transdermal 19=Translingual 2Ø=Urethral 21=Vaginal 22=Enteral Comments: When reporting Compound ingredients (Compound Code = 2), this field represents the route of administration for the complete compound mixture.
23	Quantity Dispensed – Quantity dispensed expressed in metric decimal units.	9(07)v999	N	10	Format=9999999.999 Comments: When reporting Compound ingredients (Compound Code = 2), this field represents the quantity of the ingredient being dispensed for the compound.

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DE#	Data Element Description	Format	Standard Formats	Field Length	Special Instruction
24	Dispensing Status – Code indicating the quantity dispensed is a partial fill or the completion of a partial fill. Used only in situations where inventory shortages do not allow the full	X(01)		1	Blank=Not Specified P=Partial Fill C=Completion of Partial Fill
25	Quantity Intended to be Dispensed – Metric decimal quantity of medication that would be dispensed on original filling if inventory were available. Used in association with a 'P' or	9(07)v999	N	10	Format=9999999.999 If sending this field, an assumption is made that 'Days Supply Intended To Be Dispensed' (345-HG) is also sent.
26	Days Supplied – Estimated number of days the prescription will last.	9(03)	N	3	Format=999
27	Days Supply Intended to be Dispensed - Days supply for metric decimal quantity of medication that would be dispensed on original dispensing if inventory were available. Used in association with a	9(03)	N	3	Format=999
28	Fill Number - The code indicating whether the prescription is an original or a refill.	9(02)	N	2	Format=99
29	Number of Refills Authorized - Number of refills authorized by the	9(02)	N	2	Format=99

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DE#	Data Element Description	Format	Standard Formats	Field Length	Special Instruction
30	Compound Code - Code indicating whether or not the prescription is a	9(01)		1	Ø=Not Specified 1=Not a Compound 2=Compound
31	Compound Number – Unique number assigned to the group of drugs that make up the complete compound drug.	9(08)	N	8	This number is used to tie the collection of billings records, which make up the complete compound drug, together. This field must be used when Compound Code = 2.
32	Compound Ingredient Component Count - Count of compound product IDs (both active and inactive) in the compound mixture.	9(02)	N	2	This must equal the number of billing records submitted for this Compound Number. This field must be provided when Compound Code = 2.
33	Level of Service - Coding indicating the type of service the provider rendered.	9(02)	N	2	Ø=Not Specified 1=Patient consultation 2=Home delivery 3=Emergency 4=24 hour service 5=Patient consultation regarding generic product selection
34	Prior Authorization Number - Unique number identifying the prior authorization assigned by the processor.	9(11)	N	11	Format=99999999999 <u>Comments:</u> Provided to the pharmacy by the processor to be used by the pharmacy for billing, and if applicable, reversal purposes.
35	Intermediary Authorization ID - Value indicating intermediary authorization occurred	9(11)	N	11	Format=99999999999

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DE#	Data Element Description	Format	Standard Formats	Field Length	Special Instruction
36	Provider ID – National Provider Identifier (NPI) assigned to the person responsible for the dispensing of the	X(10)	LJ	10	
37	Prescriber ID - National Provider Identifier (NPI) assigned to the prescriber.	X(10)	LJ	10	
38	Diagnosis Code Type – Type of code being reported in the Diagnosis Code field	X(02)	LJ	2	Blank = Not Specified 01 = International Classification of Diseases (ICD9) 2 = International Classification of Diseases (ICD10) Comments: Must be non-blank when Diagnosis Code field is filled in.
39	Diagnosis Code - Code identifying the diagnosis of the patient.	X(06)	LJ	6	Comments: ICD diagnosis reported without decimal using standard reporting convention.
40	Gross Amount Due – Total price claimed from all sources. Field represents a sum of Professional Services Fee, Flat Sales Tax Amount Submitted, Percentage Sales Tax Amount (if applicable),	9(06)v99	N	8	Format=s$$$$$$cc Examples: If the gross amount due is $14.95, this field would reflect: 149E.

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DE#	Data Element Description	Format	Standard Formats	Field Length	Special Instruction
41	Price Amount per Unit – The price amount for the drug unit being dispensed. This amount includes any markups, dispensing fees,	9(08)	N	8	
42	Ingredient Cost – This amount represents the total cost for the quantity dispensed of the ingredient being billed. Specifically, it is the Unit ingredient cost times the Quantity Dispensed.	S9(06)v99	N	8	Format=s$$$$$$cc Examples: If the ingredient cost submitted is $65.ØØ, this field would reflect: 65Ø{. Comments: When reporting Compound ingredients (Compound Code = 2), this field represents the ingredient cost of the product included in the compound mixture.
43	Dispensing Fee - Dispensing fee charged by the pharmacy.	S9(06)v99	N	8	Format=s$$$$$$cc Examples: If the pharmacy submitted a $5.62 dispensing fee, this field would reflect: 56B.
44	Professional Service Fee - Amount charged by the provider for professional services rendered.	S9(06)v99	N	8	Format=s$$$$$$cc Examples: If the Professional Service Fee Submitted is $7.ØØ, this field would reflect: 7Ø{.
45	Flat Sales Tax Amount – The amount of the flat sales tax that was applied	S9(06)v99	N	8	Format=s$$$$$$cc Examples: If the flat sales tax amount submitted is $3.Ø8, this field would reflect: 3ØH.

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DE#	Data Element Description	Format	Standard Formats	Field Length	Special Instruction
46	Percentage Sales Tax – The amount of the percentage sales tax that was applied	S9(06)v99	N	8	Format=s$$$$$$cc Examples: If the percentage sales tax amount submitted is $4.47, this field would reflect: 44G.
47	Percentage Sales Tax Basis - Code indicating the basis for percentage sales tax.	X(02)		2	Ø1=Gross Amount Due Ø2=Ingredient Cost Ø3=Ingredient Cost + Dispensing Fee
48	Incentive Amount - Amount represents a fee that is submitted by the pharmacy for contractually agreed upon services	S9(06)v99	N	8	Format=s$$$$$$cc Examples: If the incentive amount submitted is $4.5Ø, this field would reflect: 45{.
49	Other Amount Claimed Submitted - Amount representing the additional incurred costs for a dispensed prescription or service.	S9(06)v99	N	8	Format=s$$$$$$cc Comments: Qualified by 'Other Amount Claimed Submitted Type' Examples: If the other amount claimed submitted is $12.55, this field would reflect: 125E.
50	Other Amount Claimed Submitted Type - Code identifying the additional incurred cost claimed in 'Other Amount Claimed Submitted'	X(02)		2	Blank=Not Specified Ø1=Delivery Cost Ø2=Shipping Cost Ø3=Postage Cost Ø4=Administrative Cost 99=Other
51	Usual and Customary Charge - Amount charged cash customers for the prescription exclusive of sales tax or other amounts	S9(06)v99	N	8	Format=s$$$$$$cc Examples: If the usual and customary charge is $32.56, this field would reflect: 325F.

n:	**Request Number:**
Prepared By: Pat Thelen	**Phone :** 373-1084
File Name: Pharmacy Export File	File Number:

Remarks:

Standard Format Key:

N – Unsigned Numeric, always right justified, zero filled and when used for dollar fields, have default values of zeros.

Example: 9(07)v999 represents 9999999999 with an implied decimal point between the 7th and 8th digit from the right.

LJ – Left Justified, pad on right with trailing spaces

(MMDDYYYY) - Date format of two digit month, two digit day and four digit year

Format: s$$$$$$cc – Signed Numeric , sign is internal and trailing, zero always positive, always right justified, zero filled dollar-cents amount with 2 positions to the right of the implied decimal point, all other positions to the left of the implied decimal point and when used for dollar fields, have default values of zero

DE#	Data Element Description	Format	Standard Formats	Field Length	Special Instruction
52	Basis of Cost Determination - Code indicating the method by which 'Ingredient Cost Submitted' was calculated	X(02)		2	Blank=Not Specified ØØ=Not Specified Ø1=AWP (Average Wholesale Price) Ø2=Local Wholesaler Ø3=Direct Ø4=EAC (Estimated Acquisition Cost) Ø5=Acquisition Ø6=MAC (Maximum Allowable Cost) Ø7=Usual & Customary Ø9=Other Comments: When reporting Compound ingredients (Compound Code = 2), this field represents the basis of cost determination for the product included in the compound mixture.

n:	**Request Number:**
Prepared By: Pat Thelen	**Phone :** 373-1084
File Name: Pharmacy Export File	File Number:

Remarks:

Standard Format Key:

N – Unsigned Numeric, always right justified, zero filled and when used for dollar fields, have default values of zeros.

Example: 9(07)v999 represents 9999999999 with an implied decimal point between the 7th and 8th digit from the right.

LJ – Left Justified, pad on right with trailing spaces

(MMDDYYYY) - Date format of two digit month, two digit day and four digit year

Format: s$$$$$$cc – Signed Numeric , sign is internal and trailing, zero always positive, always right justified, zero filled dollar-cents amount with 2 positions to the right of the implied decimal point, all other positions to the left of the implied decimal point and when used for dollar fields, have default values of zero

DE#	Data Element Description	Format	Standard Formats	Field Length	Special Instruction
53	Dispense As Written Code - Code indicating whether or not the prescriber's instructions regarding generic substitution were followed.	X(01)		1	Ø=No Product Selection Indicated-This is the field default value that is appropriately used for prescriptions where product selection is not an issue. Examples include prescriptions written for single source brand products and prescriptions written using the generic name and a generic product is dispensed. 1=Substitution Not Allowed by Prescriber-This value is used when the prescriber indicates, in a manner specified by prevailing law, that the product is to be Dispensed As Written. 2=Substitution Allowed-Patient Requested Product Dispensed-This value is used when the prescriber has indicated, in a manner specified by prevailing law, that generic substitution is permitted and the patient requests the brand product. 3=Substitution Allowed-Pharmacist Selected Product Dispensed-This value is used when the prescriber has indicated, in a manner specified by prevailing law, that generic substitution is permitted and the pharmacist determines that the brand product should be dispensed. 4=Substitution Allowed-Generic Drug Not in Stock-This value is used when the prescriber has indicated, in a manner specified by prevailing law, that generic substitution is permitted and the brand product is dispensed since a currently marketed generic is not stocked in the pharmacy.

ID	Task Name	Start	Finish	Resource Names
1				
2	**Preliminary Mediware Project Plan**	**Fri 8/21/09**	**Thu 4/1/10**	
3	**PHASE 1: PLANNING AND ANALYSIS**	**Fri 8/21/09**	**Wed 9/16/09**	
4	**Pre Implementation Preparation**	**Tue 9/1/09**	**Wed 9/16/09**	
13	**Sales Transition Call**	**Tue 9/1/09**	**Wed 9/2/09**	
29	Create project plan template & schedule	Wed 9/2/09	Thu 9/3/09	CPM,CPL,MPM
30	**Deliver Project Tools**	**Thu 9/3/09**	**Fri 9/4/09**	
41	**Interfaces - Request for Specifications**	**Fri 9/4/09**	**Tue 9/8/09**	
45	**Review and modify project tools**	**Fri 8/21/09**	**Fri 9/4/09**	
46	**Kick-off and Implementation Planning Meeting**	**Fri 8/21/09**	**Wed 9/2/09**	
64	Finalize & approve project plan	Wed 9/2/09	Fri 9/4/09	MPM,CPM
65				
66	**PHASE 2: TECHICAL SETUP**	**Fri 8/21/09**	**Thu 10/22/09**	
67	Deliver Master File Data per Mediware Specifications (Data Conversion)	Fri 8/21/09	Fri 8/21/09	CDA,CSA
68	Dial-in procedures established	Fri 8/21/09	Fri 8/21/09	CSA,CDA
69	Identify application administrators and tasks	Fri 8/21/09	Fri 8/21/09	CSA,CDA
70	Identify system administrators and tasks	Fri 8/21/09	Fri 8/21/09	CSA,CDA
71	Systems administrators identified	Fri 8/21/09	Fri 8/21/09	CSA,CDA
72	Dial in procedures established for remote locations	Fri 8/21/09	Fri 8/21/09	CSA,CDA
73	Server location and power source identified	Fri 8/21/09	Fri 8/21/09	CSA,CDA
74	**Installation Preparation**	**Fri 8/21/09**	**Thu 9/10/09**	
78	**Network Drops Identified**	**Fri 9/18/09**	**Tue 9/22/09**	
82	**Network installation**	**Fri 9/11/09**	**Mon 9/21/09**	
86	**Hardware**	**Tue 9/22/09**	**Thu 9/24/09**	
90	**Laser Printers**	**Fri 9/25/09**	**Thu 10/1/09**	
96	**Zebra printers**	**Thu 10/1/09**	**Mon 10/12/09**	
106	**Workstations**	**Mon 10/12/09**	**Thu 10/22/09**	
118	**Software**	**Fri 9/25/09**	**Tue 9/29/09**	
138	**System Administrator**	**Tue 9/29/09**	**Mon 10/5/09**	
142	System administration training (onsite)	Tue 9/29/09	Wed 9/30/09	MTC,CSA,CDA
143				
144	**PHASE 3: PROJECT TEAM EDUCATION**	**Mon 10/12/09**	**Wed 1/6/10**	
145	**Training for Core Team**	**Mon 10/12/09**	**Fri 10/16/09**	
148	**Onsite File Building and Development (WORx)**	**Fri 10/16/09**	**Wed 1/6/10**	
149	**IP File Building Training**	**Fri 10/16/09**	Thu 10/22/09	
150	WORX File Building Training (on-site)	Fri 10/16/09	Tue 10/20/09	CPM,CPL,CAA,CPC,CEC,MIC
151	**MediCOE File Building Training (on-site)**	**Tue 10/20/09**	**Wed 10/21/09**	
161	**MediMAR File Building Training (on-site)**	**Wed 10/21/09**	**Thu 10/22/09**	
181	Workgroup/Workflow process review MediCOE (Pilot)	Fri 12/25/09	Tue 12/29/09	CPM,CPL,CAA,CPC,CEC,MIC
182	Workgroup/Workflow process review MediMAR (Pilot)	Mon 1/4/10	Wed 1/6/10	CPM,CPL,CAA,CPC,CEC,MIC
183				
184	**PHASE 4: PRODUCT AND PROCESS DESIGN/BUILD**	**Fri 8/21/09**	**Thu 3/4/10**	
185	**Output Development (if needed)**	**Fri 8/21/09**	**Fri 10/23/09**	
186	**Label development (*)**	**Mon 9/14/09**	**Fri 10/23/09**	
196	**MAR Development (*)**	**Fri 8/21/09**	**Mon 10/19/09**	
206	**Custom Reports (*)**	**Fri 8/21/09**	**Thu 10/15/09**	
215	**Physician Order Form (*)**	**Fri 8/21/09**	**Thu 10/22/09**	
222				
223	**Security**	**Mon 9/14/09**	**Fri 10/23/09**	
231	**Master List Files**	**Fri 10/23/09**	**Mon 11/30/09**	
255	**Support Files**	**Wed 10/28/09**	**Thu 3/4/10**	
256	Outpatient Billing Code Varieables	Wed 10/28/09	Thu 10/29/09	CPC,CAA
257	Outpatient Payors for OLA Bill Codes	Thu 10/29/09	Fri 10/30/09	CAA,CPC
258	Billing Codes and Formulas	Fri 10/30/09	Tue 11/3/09	CAA,CPC
259	Doctor Files	Tue 11/3/09	Wed 11/4/09	CAA,CPC

260	**Frequency Master**	**Wed 10/28/09**	**Fri 11/20/09**	
270	**Inventory Setup**	**Fri 11/20/09**	**Wed 12/2/09**	
279	**Order Masters (Standard for all sites)**	**Wed 12/2/09**	**Fri 12/25/09**	
283	**Clinical Masters**	**Fri 12/25/09**	**Mon 1/11/10**	
289	**Printers**	**Mon 1/11/10**	**Tue 1/12/10**	
292	**Production Jobs**	**Tue 1/12/10**	**Thu 1/14/10**	
301	**OLA Development**	**Thu 1/14/10**	**Thu 3/4/10**	
312	**Review MediCOE Admin Switches/Options**	Thu 1/14/10	Fri 1/15/10	
313	**MediMAR Files**	**Fri 12/25/09**	**Mon 1/4/10**	
326	**Interface delivery/installation**	**Fri 8/21/09**	**Tue 11/17/09**	
327	**ADT Interface**	**Tue 9/29/09**	**Wed 11/11/09**	
335	**Billing Interface**	**Tue 9/29/09**	**Tue 11/17/09**	
342	**On Line Adjudication**	**Fri 8/21/09**	**Wed 9/30/09**	
347				
348	**PHASE 5: PROCESS AND PRODUCT TEST**	**Tue 11/17/09**	**Mon 12/14/09**	
349	Setup and verify operational test environment	Tue 11/17/09	Wed 11/18/09	MIC
350	Conduct data recovery tests	Wed 11/18/09	Fri 11/20/09	CDA,MIC
351	**Integration Testing**	**Tue 11/17/09**	**Thu 12/3/09**	
364	Operational procedure verification	Tue 11/24/09	Thu 12/3/09	CPC,CAA
365	**Super User Training**	**Thu 12/3/09**	**Mon 12/14/09**	
369				
370	**PHASE 6: END USER TRAINING AND PRODUCTION PREPARATION**	**Thu 12/10/09**	**Tue 3/16/10**	
371	**Pre-Go Live Site 1:**	**Thu 12/10/09**	**Tue 2/9/10**	
372	Setup and verify operation of training environment	Thu 12/10/09	Thu 12/10/09	CAA,CEC
373	Schedule user training	Thu 12/10/09	Thu 12/10/09	CEC,CPL
374	Develop user procedures documentation	Fri 12/11/09	Mon 12/14/09	CPC,CAA
375	**Develop training materials**	**Tue 12/15/09**	**Wed 12/16/09**	
377	**Execute training plan**	**Thu 12/17/09**	**Wed 12/30/09**	
381	**Create productive use plan**	**Thu 12/31/09**	**Fri 1/8/10**	
384	**Legacy Pharmacy System Phase Out**	**Mon 1/11/10**	**Tue 2/9/10**	
390	**Test Toolkit Prep**	**Mon 1/11/10**	**Mon 1/11/10**	
394	**Create Production Database**	**Mon 1/11/10**	**Tue 1/12/10**	
397	**Production Toolkit Prep**	**Tue 1/12/10**	**Wed 1/13/10**	
414	Verify Patient Census from admitting against Worx	Wed 1/13/10	Fri 1/22/10	CPC,CPL
415	Readiness Review Conference Call	Wed 1/13/10	Wed 1/13/10	CPM,CPL,CSA,CDA,CAA,CEC,M
416	**Pre-Go Live Site 2:**	**Thu 12/17/09**	**Tue 2/16/10**	
461	**Pre-Go Live Site 3:**	**Thu 12/31/09**	**Tue 3/2/10**	
506	**Pre-Go Live Site 4:**	**Fri 1/8/10**	**Tue 3/9/10**	
551	**Pre-Go Live Site 5:**	**Fri 1/15/10**	**Tue 3/16/10**	
596				
597	**PHASE 7: PRODUCTIVE USE**	**Mon 9/14/09**	**Thu 4/1/10**	
598	**Go Live WORx IP Site 1**	**Wed 1/13/10**	**Wed 1/20/10**	
599	Pre Live Meeting	Wed 1/13/10	Wed 1/13/10	MIC,MPM,CEC,CAA,CDA,CSA,CI
600	**Order Entry into Worx**	**Wed 1/13/10**	**Thu 1/14/10**	
604	**Cut Over**	**Thu 1/14/10**	**Wed 1/20/10**	
618	Assist Pharmacy with Reports as needs	Fri 1/15/10	Wed 1/20/10	MIC
619	Verify first billing with Site	Fri 1/15/10	Wed 1/20/10	MIC
620	Post Go-Live Closing Meeting	Wed 1/20/10	Wed 1/20/10	MIC,CEC,CAA,CDA,CSA,CPL,CF
621	**Go Live WORx IP Site 2**	**Wed 1/20/10**	**Wed 1/27/10**	
644	**Go Live WORx IP Site 3**	**Wed 2/3/10**	**Wed 2/10/10**	
667	**Go Live WORx IP Site 4**	**Wed 2/10/10**	**Wed 2/17/10**	
690	**Go Live WORx IP Site 5**	**Wed 2/17/10**	**Wed 2/24/10**	
713				

714	Go Live MedCOE (Pilot Site Golive Date = TBD, need to plan with Michigan Team)	Wed 1/20/10	Thu 4/1/10	
719	Go Live MediMAR (Pilot Site Golive Date = TBD, need to plan with Michigan Team)	Wed 1/20/10	Thu 4/1/10	
724	MediREC Implementation Project (Pilot Site Golive Date = TBD, need to plan with Mic	Wed 1/20/10	Thu 4/1/10	
753	WORx IP On Line Adjudication (OLA) (Pilot Site Golive Date = TBD, need to plan with	Mon 9/14/09	Thu 4/1/10	
774				
775	PHASE 8: SUPPORT TRANSITION	Tue 2/9/10	Thu 3/25/10	
776	Site 1 Turnover for WORx IP	Tue 2/9/10	Thu 2/18/10	
779	Site 2 Turnover for WORx IP	Tue 2/16/10	Thu 2/25/10	
782	Site 3 Turnover for WORx IP	Tue 3/2/10	Thu 3/11/10	
785	Site 4 Turnover for WORx IP	Tue 3/9/10	Thu 3/18/10	
788	Site 5 Turnover for WORx IP	Tue 3/16/10	Thu 3/25/10	

APPENDIX D
Preliminary Project Plan
MDCH Facility Pharmacy System

WORx Project Plan Specifications

1. All database and application servers will be centralized at the State's single data center facility.

2. The test environment will reside on the same database server as the production environment unless otherwise noted in the contract.

3. Main system testing activities will be performed at least once at the main facility test environment. Secondary testing, if needed, will be performed at each additional site.

4. Testing shall include system configuration parameters, security, functional processes, environment, and performance.

5. Onsite System Administration Overview training will be conducted at the State's data center facility at the completion of the installation.

6. The State has primary responsibility for executing testing activities, with Contractor providing guidance and assistance.

7. Onsite visits will include the following visits and resources:

   (a) Kickoff Meeting – 3 Contractor Representatives (up to 2 days)
   (b) Installation – 1 Contractor Representative (4 days)
   (c) File Building Training – 1 Contractor Representative (2 days)
   (d) Operational Training – 1 Contractor Representatives (3 days)
   (e) Go Live Support – 2 Contractor Representatives (up to 5 days)

8. All Contractor training is conducted under the Train the Trainer concept.

9. The State site will assign as needed an Application Administrator, Database Administrator, and System Administrator to work with Contractor. The State will also assign a Project Manager to coordinate implementation and related activities (including across sites) and to act as a central point of contact with Contractor.

10. Custom Programming is outside the scope of the Core Functionality implementation plan.

11. Contractor provides specifications for the file formats required for loading of specified tables the current State system. The State will prepare the sample records in this format and submit the sample formats to Contractor for review. Once the formats are acceptable to both parties, the State will provide an initial data set to be loaded by Contractor into the State's system for testing. Contractor will load data sets, prepared by the State, into the State's system prior to File Building. Further discussion may be required to define the steps required to address site-specific requirements.

12. The implementation estimate assumes that first Productive Use assistance will occur during Contractor's normal business hours.

13. All customizations will deployed via a single upgrade following (WORx) full implementation at all five facilities.

14. Data conversion will be performed on active patients only utilizing a standard Flat file interface. Additional scope will be completed with R&D support if included in the scope of this implementation.

15. All SQR outputs (MAR, fill lists, labels) will be standardized across all five facilities.

16. There will be a common formulary for use by all five facilities (required by target date in Project Plan).

17. Default values will be used for all application preferences. Any changes/customization of default values must be completed by the State by specified target dates in the Project Plan.

18. There will be a centralized team representing the States that will have the authority to make decisions for all facilities for items such as file building and testing.

19. A system and application administrator for the State will be assigned at the onset of the project. These individuals will be responsible for security, FDB updates, standard configuration that is managed by the State, etc.

20. The State will provide a facility to conduct training that includes hardware.

21. An input file will be provided of NDC files from the wholesaler (believed to be Amerisource Bergen) at the time that WORx software is being loaded on the server.

22. To have OLA operational with patient insurance data by June 1st, State will need to provide a file with patient insurance data in the required format Contractor will provide specifications at the onset of the project.

23. To have OLA operational by June 1st, State will need to have the IP OLA switch contract approved and switch provider software ready to install. NOTE: Contractor is certified with Emdeon and Relay – more time would be needed to certify another vendor.

24. For WORx PO – the catalog (832 standard EDI file) is required. To perform electronic PO/acknowledgements (850/855) standard EDI files are required.

25. Will need State to have all HW and Network Requirements in place by mid January, 2010

26. Onsite WORx Training for Michigan Core Team would need to be completed.

27. State would need to provide samples of Table Build input using Contractor templates Contractor will then use scripts to load into database.

28. Anticipated State resources to complete Project Plan:

    1,048 hours of State time to complete rollout at initial site
    1,052 hours of State time to complete rollout at sites 2-5
    2,100 total hours of State time to complete rollout at all sites (323 person days assuming 6.5 hr days)

29. Central interface system with common feeds and configuration for all sites

30. Without limiting Contractor's obligation with respect to the Core Functionality, concurrent Project Plan (WORx, MediMAR, MediCOE, and MediREC) with ability to shuffle final product go-live dates as needed.

35. Additional MediMar/MediCOE/MediREC Project Plan Specifications Follow.

MediMAR, MediCOE & MediREC Project Plan Specifications

The process includes two distinct phases. Phase I is the implementation of MediMAR, MediCOE and MediREC in the floors or wards that will initially use the software and Phase II is the implementation/rollout of MediMAR, MediCOE and MediREC throughout the entire facility. After Super User and Train the Trainer training, the State will role out MediMAR, MediCOE and MediREC to additional facility and units in consultation with Contractor.

"Implementation of Initial Floors or Wards" (Phase I)

Contractor responsibilities as part of Phase I:
- Provide an implementation contact and support during implementation
- Identify hardware configurations and requirements
- Identify software configurations and requirements
- Identify Project Criteria for initial areas, resources, timelines
- Assist with Project Management activities
- Install MediMAR, MediCOE and MediREC software into test environment
- Conduct file building and configuration training for super users (controlled number of train the trainers in this group)
- Conduct operational training for super users
- Install MediMAR, MediCOE and MediREC software in production environment
- Assist with super user training– pilot areas only
- Provide First Productive Use support on-site
- Provide post-First Productive Use support (for period immediately after Go-Live)
- Contractor will provide a central contact point for installation and support through the pilot period. This will include an Implementation Analyst and the Contractor Product Director.

the State Responsibilities Phase I:
- Appoint a full time in-house clinician to co-lead the installation
- Identify resource as system administrator
- Identify resources to assist with the implementation and throughout the project
- Upgrade Equipment to meet requirements
- Identify pilot areas and pilot users
- Upgrade WORx test States to current supported version of WORx
- Test WORx environment
- Build and configure MediMAR, MediCOE and MediREC in test environment
- Initial testing of MediMAR, MediCOE and MediREC software
- Regression testing of MediMAR, MediCOE and MediREC software
- Integrated testing of MediMAR, MediCOE and MediREC software
- Manage project and overall issues list
- Provide Contractor personnel and staff access to System and Licensed Software
- Address/resolve operational issues such as workflow, interfaces, bar-coding, etc
- Create and implement training documentation
- Train pilot initial users
- Provide resources for first productive use support
- Provide resources for post first productive use support
- Agree to conduct reference checks and site visits for future/potential Mediware State Customers
- Such other activities as may be required to implement the MediMAR, MediCOE and MediREC Software.

"Installation and Pilot Use "(Phase I)

Contractor responsibilities as part of Phase I:
The Project Plan assumes that Contractor will take the following actions together with State's assistance and involvement:
- Review Hardware & 3rd Party Software Requirements with the State
- Training for File Building & Configuration
  - Physician Privileges

- Consulting Groups, Locations, etc.
- Physician Favorites, Order Sets, etc.

➢ Run Test Scripts Through Software, using the State Created Tables
➢ Select Pilot Location and Pilot Users
➢ Assist with Selecting Pilot Location and Users
  - Determine criteria for Pilot
  - Number of Users
  - Location
➢ Train the State's Trainers
➢ Assist with Training Pilot Site Users
➢ Contractor will provide a central contact point for installation and support through the pilot period. This will include an Implementation Analyst and the Contractor Product Director.

the State Responsibilities as part of Phase I:
The Project Plan assumes that State will take the following actions together with Contractor assistance and involvement as provided above.

➢ Appoint an in-house clinician (Registered Nurse, Physician Assistant, Physician, etc) to co-lead the installation
➢ Provide additional staff to assist and complete installation tasks.
➢ Upgrade hardware if necessary
➢ Obtain commitments from a minimum number of Pilot Users to use the system during the pilot period.
➢ Engage physicians and nurses in the review of the table values and configuration options prior to Pilot go-live.
➢ Run Test Scripts Through Software, using the State Created Tables
➢ Creation and management of an "Issues List"
➢ Resolving all work-flow issues, interface issues, bar-coding issues, and any other obstacles to installation of the software.
➢ Will provide feedback on the overall functionality of the system and prioritized enhancement requests and issues list.
➢ Provide utilization statistics to Contractor at the end of the Pilot timeframe
➢ Agree to accept reference calls and conduct site visits as reasonably required
➢ Will provide a work-space for Contractor representatives while onsite

"Implementation / Rollout" (Phase II) MediMAR, MediCOE and MediREC
Rollout will be completed by the State. An example of the "implementation" task responsibilities and timelines that are the responsibility of the State are:

the State Responsibilities as part of Phase II:

➢ Define the Business Case for CPOE / MediCOE enterprise wide Rollout
➢ Obtain Sign-Off of the Business Case by Executives, Physician, Nursing, & Pharmacy Leadership
➢ Define an Organizational Structure for the Rollout Project (Steering Committee, Issues List, Work-Plan, Location Task Forces, etc.)
➢ Define Rollout Issues Escalation Process
➢ Document Current Workflow processes
➢ Design New Workflow Processes
➢ Train The Users
➢ Create detailed Implementation / Rollout Workplan

Contractor responsibilities as part of Phase II:
Contractor Information Systems can be engaged to assist with the above Phase II rollout upon the State's request for additional fees.

Appendix E
Pricing and Identification of Licensed Software and Included Customizations and Payment Terms
MDCH Facility Pharmacy System

Table 1: Summary of the Project Cost

Item	Cost Categories	Cost ($)	% of the Total Cost	Holdback % Final Acceptance	Holdback $	Comments
A.	**COTS Package** One time cost of vendor's proposed COTS package.	$458,638	23%	-	-	Includes WORx Inpatient System (33 workstations), WORx PO Module (5 sites), MediMAR (52 nursing stations), MediCOE (96 prescribers) and MediREC (5 sites) and the following Sublicensed Software: a) 4, 100 Value Units, Informix Dynamic Server 9.x License (Enterprise Edition - Unlimited Use); (b) 1 Production Toolkit Hyperion SQR; (c) 5 User Infomaker for Windows for creating PC-based reports; (d) 5 Site First DataBank License; 1 Bridge Forward Clearspan.
B.	**Customization of COTS Package** Fixed Fee based on customization of the COTS package to meet required business requirements. See breakdown in Table 4.	$417,000	21%	10%	$41,700	Includes customization of the COTS Package to meet the items identified in the RFP as "Required" business requirements.
C.	**Interfaces** Fixed Fee. See breakdown in Table 5.	$122,500	6%	50%	$61,250	Assumes use of Contractor's translator tool with custom maps to read flat file formats.
D.	**Training and Documentation** Fixed Fee. See breakdown in Table 6.	$138,250	7%	10%	$13,825	Mediware assumes a train-the-trainer approach with onsite training at each facility.
E.	**Active Patient Load** Fixed Fee. See breakdown in Table 7.	$135,000	7%	10%	$13,500	Contractor will load active patients into the system. Key fields include medical record number (MRN), visit ID, patient name, bed, location, physician, allergies and insurance data for OLA. Current and previous medication orders for Active Patients will be loaded to system.
F.	**Project Implementation** Fixed Fee. See breakdown in Table 8.	$529,350	26%	-	-	Assumes the State will operate five facilities from a single data center, using a single database.
G.	**Labor Rates for Reserve Bank of Hours** See breakdown in Table 9	$75,000	4%	-	-	Based on 500 hours x $150/hour.

Item	Cost Categories	Cost ($)	% of the Total Cost	Holdback % Final Acceptance	Holdback $	Comments
H.	**Optional Customization** See breakdown in Table 9	$142,200	7%	10%	$14,220	Includes customization of the COTS Package to meet the items identified in the RFP as "Optional" business requirements.
	Total Project Cost	**$2,017,938**	**100%**		**$144,495**	

Table 2: Five Years Recurring Cost: Updates, Maintenance and Support

No.	Cost Categories	Cost ($)	Comments
A.	**COTS/Application software update cost (Includes licensing and updates each year)**		The Contractor Licensed Software updates are included in the annual maintenance fee.
	1. First Year (after 90 day warranty)	$0	
	2. Second Year	$0	
	3. Third Year	$0	
	4. Fourth Year	$0	
	5. Fifth Year	$0	
B.	**Maintenance and support cost** (includes scope as outlined in Contractor's Annual Support SOW)		*Assumes a 5% increase per year. Does not include sublicensed software increases, if any, or services outside the scope of Contractor's standard maintenance and support services.
	1. First Year	$146,309	
	2. Second Year	$153,624	
	3. Third Year	$161,306	
	4. Fourth Year	$169,371	
	5. Fifth Year	$177,839	
	Total Recurring Cost	**$808,449**	

Table 3: Total 5 Years System Cost

Table	Cost Categories	Cost ($)
Table 1	**Total Project Cost (One Time)**	$2,017,938
Table 2	**Total Reoccurring Cost**	$808,449
	Total 5 Years System Cost	**$2,826,387**

Table 4: Breakdown of Customization of COTS Package

No.	Item No.	List functional or technical requirement	One-Time cost ($)
	2-01*	The system includes capability for APIs that enable the State to develop custom interfaces to all modules.	$37,500
		Order Creation (Electronic Physician Ordering Entry)	
	2-21	· Insurance/Third Party Payer information	$3,000
	2-53	· Interval duration code, (defines the unit of measure for describing the dispensing interval number e.g., “days”);	$3,000
	2-82	Provides functionality for tapered orders.	$75,000
	2-106	Provides functionality for fully documented medication reordering process with reason codes (or reorder “code” system)	$3,000
		IV Order Processing	
	3-166	Provides IV compatibility checking.	$3,000
		Inventory & Purchasing	
	3-404	Ability to interface/support reconciliation of Returned Drugs with records of contracted Returned Goods processor; minimally to reconcile inventory when expired/damaged drugs are returned	$37,500
	3-405	Ability to extract from the system database re-called items and or discontinued items.	$37,500
		Tracks Inventory of:	
	3-420	Supports functionality for scanning of medications to be returned/destroyed and noted as such in the pharmacy computer system. Pharmacy able to document reason for return and reason for destruction/return processing.	$3,000
	3-421	Supports functionality for automatic electronic update of list (AWP) price; acquisition cost; AMP (Avg. Manufacturers price); SPECIFY FREQUENCY OF AUTOMATIC UPDATING	$3,000
B.	3-422	Supports functionality to generate reports of all modifications to product pricing.	$3,000
	3-442	· Exception report noting significant supplier cost increases or decreases.	$3,000
		Administration and Documentation of Medication	
		Physician Order Renewals/ Medication Administration Record (MAR)	
	4-18	Supports functionality for patient specific non-medication orders, user defined, to be listed along with medications on the MAR.	$75,000
	4-19	Supports functionality for user defined information to be printed in the “timing” portion of the MAR, such as “Pulse”, “B/P”, or similar.	$3,000
		Data analysis / Reports	
	5-30	Supports ability to flag early refills and report	$3,000
	5-33	System alerts / flags medication / prescription orders when price changes occur	$3,000
		Reports	
		Reports (data analysis, mining, inventory)	
	6-31	Order entry alert “override" or "bypass” report.	$3,000
	6-32	Report identifying users that override or bypass alerts (e.g., allergies / ADRs, drug interactions, etc.)	$3,000
		Other Functionalities	
		General System / Misc.	
	7-6	Supports processing and dispensing of discharge prescriptions for use outside the hospital to meet all Michigan regulations.	$75,000
		Audit / Security	
	7-39	Software must support strong passwords for user accounts	$37,500
	Article 1	1.104 Work and Deliverables	
	I.F.4.a.vi.	Support Services – Initial (one-time) adaptive and preventive maintenance addressing disaster recovery plan activities.	$3,000
		Total Cost of Customization	**$417,000**

Table 5: Breakdown of Interfaces Cost

No.	Interfaces	Cost ($)	Comments
C.	1. (1) ADT Interface	$45,500	Based on use of Contractor's use of translator tool with custom maps to read flat file formats.
	2. (1) Billing Interface	$45,500	Based on use of Contractor's use of translator tool with custom maps to read flat file formats.
	3. (1) IPOLA Interfaces	Included	License Fee based on use of Contractors standard specifications and assumes centralized operations.
	4. (1) Medication Reconciliation	$18,000	Based on use of Contractor's standard specifications and assumes centralized operations.
	5. (2) WORx Integration Toolkit (Tier 3)	$13,500	Assumes all five sites operate from a single data center on a single database.
	Total Cost of Interfaces	**$122,500**	

Table 6: Breakdown of Training and Documentation Cost

Table	Training cost and Documentation	Cost ($)
D.	1) Train-the-Trainer training	$21,600
	2) Train-the-Trainer training documentation	Included
	3) Operational management training	$88,500
	4) Operational management training documentation	Included
	5) DBA training	$3,150
	6) DBA training documentation	Included
	Other (List): 7) Out-of-pocket expenses	$25,000
	Total Cost of Training & Documentation	**$138,250**

Table 7: Breakdown of Active Patient Load Cost

Table	Resources Required	Total # of resources	Total # of hours	Unit cost ($)	Total cost ($)
E.	**Data Conversion and Migration:** List the type of resources:				
	1. Data Architect (Initial Planning/Design)	1	72	$150	$10,800
	2. Technical Consultant (40 hours per site)	1	200	$150	$30,000
	3 Load of Active Patient Orders	1	225	$100	$22,500
	4.Load of prior orders for current patients	1	717	$100	$71,700
	5.				
	Total cost of Active Patient Load	3	497		$135,000

Table 8: Project Implementation Cost

Table	Resources Required	Total # of resources	Total # of hours	Unit cost ($)	Total cost ($)
F.	**1. Project Management**	1	*	$150.00	
	2. Integration: (Integration of your COTS/Application software product with customized code and external interfaces)	1	*	$150.00	
	3. Testing: (a) Unit, (b) System, (c) Integration, (d) Performance (load and stress), (e) Parallel Testing VERIS–VVRS), (f) UAT, (g) Other (List): ……	1	*	$150.00	
	4. Deployment / Cutover				
	Other (List):	Travel			$52,500
	5. File Building	1	*	$150.00	
	6. Implementation Consultant	1	*	$150.00	
	Total Cost Project Implementation	5	3,179	$150.00	$529,350

*** Based on a fixed fee project plan inclusive of 3,179 hours x $150/hour = $476,850 + $52,500 travel.**

Table 9: Labor Rates for Optional "Reserve Bank of 500(est.) Hours per year" for future enhancements & scope change

Table	Resource Type	Estimated hours	Hourly Rate	Extended Price
G.	Project management		$	
	Business analysts		$	
	System analysts		$	
	Programmer/developers	500	$ 150.00	$75,000
	System administrators		$	
	Database administrators		$	
	Q/A Manager		$	
	Security specialist		$	
	Testers		$	
	Technical writers		$	
	CM specialists		$	
	System Architects		$	
	Network engineer/administrator		$	
	Software Architects		$	
	CM specialists		$	
	Project assistants		$	
	Web developers		$	
	Application trainers		$	
	Others: (List) below):		$	
	Total Cost of Optional "Reserve Bank of 500 Hours "	**500**		**$75,000**

Notes:

1. The State intends to establish funding for reserved bank of hours for the contract, Actual funding for enhancements will occur on a yearly basis, and there is no guarantee as to the level of funding, if any, available to the project.
2. Hourly rates quoted are firm, fixed rates for the duration of the contract. **Travel and other expenses will not be reimbursed.** "Estimated Hours" and "Extended Price" are non-binding and will be used at the State's discretion to determine best value to the State. Vendors shall complete the Estimated Hours column based on prior experience performing product enhancements. The State will utilize the fully loaded hourly rates detailed above for each staff that will be used as fixed rates for responses to separate statements of work.

Table 10: Optional Customization

No.	Item No.	List functional or technical requirement	One-Time cost ($)
H.	2-9	Physician ordering by therapeutic category with alternate drug cost and therapeutic comparisons side-by-side	$90,000
	2-99	Allows for drug/drug screening without complete order entry, (independent of patient profile), to screen "potential" drugs against the current profile for interactions, duplications, etc. without entering a finalized drug order.	$3,600
	3-402	Tracks item shelf life based on purchase or expiration date and print item obsolescence report.	$3,600
	8-3	Provides ability to verify if a drug is covered by third party coverage or requires Prior Authorization approval.	$45,000
		Total Cost of Optional Customization	**$142,200**

PAYMENT TERMS

Except with respect to those payments defined below expressly tied to Final Acceptance, the payment terms below are tied to achievement of the stated event. As such the following Sections of the Contract will not be asserted to delay payment for payment terms not tied to Final Acceptance in the event the stated event has occurred: 1.500, 1.602, 2.042(d)(2), 2.253, 2.254 ad 2.256.

Due upon delivery of COTS Licensed and Sublicensed Software:

100%	COTS Package	$458,638

Due upon loading of COTS Licensed and Sublicensed Software on the State's server:

20%	Project Implementation	$105,870

Due upon upload of initial State of Michigan Formulary build into WORx:

10%	Project Implementation	$ 52,935

Due upon First Productive Use of WORx Software at the pilot Site (the first Site):

20%	Project Implementation	$105,870

Due upon First Productive Use of WORx Software at fifth Site:

20%	Project Implementation	$105,870

Due upon First Productive Use of MediMAR, MediCOE and MediREC at the pilot Site (the first Site):

20%	Project Implementation	$105,870

Due upon First Productive Use of MediMAR, MediCOE and MediREC Software at fifth Site:

10%	Project Implementation	$ 52,935

Fees for the required Customization of COTS Package (as defined in Appendix E, Table 4) will be due as follows with 10% ($41,700) held back until Final Acceptance of Required Customizations:

Upon delivery of Outline of required Customization of COTS Package Functional Requirements	$187,650
Upon loading of required Customization of COTS Package update into SOM's test environment	$187,650

Fees for the Interfaces will be due as follows with 50% ($61,250) held back until Final Acceptance of Interfaces:

Upon initial load of patient data thru ADT Interface into SOM's test environment	$ 23,537
Upon initial load of patient data thru Billing Interface into SOM's test environment	$ 23,537
Upon initial load of patient data thru Medication Reconciliation Interface into SOM's test environment	$ 8,100
Upon initial load of patient data thru WORx Integration Toolkit into SOM's test environment	$ 6,076

Fees for Training and Documentation (out-of-pocket expenses included) will be due as follows with 10% held back ($13,825) until Final Acceptance of Training Documentation:

Upon commencement of Train-the-Trainer training and following delivery of Train-the-Trainer documentation	$ 28,440
Upon commencement of operational management/Super User training and following delivery of Operational Management training documentation	$ 88,650
Upon commencement of DBA/Super User Training and following delivery of DBA Training documentation	$ 7,335

Fees for the Active Patient Load will be due as follows with 10% held back ($13,500) until Final Acceptance of Active Patient Load:

Upon loading of Active Patient demographic data	$ 36,720
Upon loading of Active Patient Orders	$ 20,250
Upon loading of prior orders for current patients	$ 64,530

Fees for the Optional Customization (as defined in Appendix E, Table 10) will be due as follows with 10% ($14,220) held back until Final Acceptance of Required Customizations:

Upon delivery of Functional Requirements	$ 63,990
Upon loading of required Customization features into SOM's test environment	$ 63,990

Work associated with the Reserve Bank of Hours will be invoiced monthly as incurred; provided, that, Contractor will have no obligation to provide more than 500 hours of services using the Reserve Bank unless additional hours are procured by the State.

Annual Maintenance and Support Fees for WORx are due upon First Productive Use of the WORx Software. Such fees to be billed monthly in advance.

Annual Maintenance and Support Fees for MediMAR are due upon Pilot Availability of the MediMAR Software. Such fees to be billed monthly in advance. Where "Pilot Availability" means the WORx software is operational the MediMAR software is installed and available for commencement of the pilot.

Annual Maintenance and Support Fees for MediCOE are due upon Pilot Availability of the MediCOE Software. Such fees to be billed monthly in advance. Where "Pilot Availability" means the WORx software is operational the MediCOE software is installed and available for commencement of the pilot.

Annual Maintenance and Support Fees for MediREC are due upon Pilot Availability of the MediREC Software. Such fees to be billed monthly in advance. Where "Pilot Availability" means the WORx software is operational the MediREC software is installed and available for commencement of the pilot.