

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

August 30, 2011

**CHANGE NOTICE No.1**  
**TO**  
**CONTRACT NO. 071B8200260**  
**between**  
**THE STATE OF MICHIGAN**  
**and**

NAME & ADDRESS OF VENDOR  <b>Measurement Incorporated</b> <b>423 Morris St.</b> <b>Durham, NC 27701</b>		TELEPHONE (919) 683-2413 <b>Henry Scherich</b>
		BUYER/CA (517) 241-3768 <b>Lance Kingsbury</b>
hscherich@measinc.com		
Contract Compliance Inspector: Joseph Martineau (517) 241-4710 <b>Administration of Michigan Merit Examination – MI-Developed – MDE (OEAA)</b>		
CONTRACT PERIOD: From: <b>August 15, 2008</b> To: <b>September 30, 2013</b>		
TERMS	<b>N/A</b>	SHIPMENT
		<b>N/A</b>
F.O.B.	<b>N/A</b>	SHIPPED FROM
		<b>N/A</b>
MINIMUM DELIVERY REQUIREMENTS		
<b>N/A</b>		

**NATURE OF CHANGE(S):**

Effective immediately, this contract is hereby **EXTENDED** to September 30, 2013 and **INCREASED** by \$4,841,540.00. All other terms, conditions, pricing and specifications remain the same.

**AUTHORITY/REASON(S):**

Per vendor and agency agreement, the approval of DTMB Purchasing Operations and the approval of the State Administrative Board on September 15, 2011.

**INCREASE: \$4,841,540.00**

**TOTAL REVISED ESTIMATED CONTRACT VALUE: \$12,499,257.00**

**STATE OF MICHIGAN**  
**DEPARTMENT OF MANAGEMENT AND BUDGET**  
**PURCHASING OPERATIONS**  
 P.O. BOX 30026, LANSING, MI 48909  
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August 29, 2008

**NOTICE**  
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**between**  
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		BUYER/CA (517) 241-3768 <b>Lance Kingsbury</b>
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TERMS  N/A	SHIPMENT  N/A	
F.O.B.  N/A	SHIPPED FROM  N/A	
MINIMUM DELIVERY REQUIREMENTS  N/A		

The terms and conditions of this Contract are those of RFP #07118200133, this Contract Agreement and the vendor's quote dated 5/14/08. In the event of any conflicts between the specifications, terms, and conditions indicated by the State and those indicated by the vendor, those of the State take precedence.

Current Authorized Spend Limit: **\$7,657,717.00**

**STATE OF MICHIGAN  
 DEPARTMENT OF MANAGEMENT AND BUDGET  
 PURCHASING OPERATIONS  
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 530 W. ALLEGAN, LANSING, MI 48933**

**CONTRACT NO. 071B8200260  
 between  
 THE STATE OF MICHIGAN  
 and**

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TERMS <p style="text-align: center;"><b>N/A</b></p>	SHIPMENT <p style="text-align: center;"><b>N/A</b></p>
F.O.B. <p style="text-align: center;"><b>N/A</b></p>	SHIPPED FROM <p style="text-align: center;"><b>N/A</b></p>
MINIMUM DELIVERY REQUIREMENTS <p style="text-align: center;"><b>N/A</b></p>	
MISCELLANEOUS INFORMATION:  <p><b>The terms and conditions of this Contract are those of RFP #07118200133, this Contract Agreement and the vendor's quote dated 5/14/08. In the event of any conflicts between the specifications, terms, and conditions indicated by the State and those indicated by the vendor, those of the State take precedence.</b></p> <p><b>Current Authorized Spend Limit: \$7,657,717.00</b></p>	

**THIS IS NOT AN ORDER:** This Contract Agreement is awarded on the basis of our inquiry bearing the RFP No. 07118200133. Orders for delivery may be issued directly by the Department of Education through the issuance of a Purchase Order Form.

<p><b>FOR THE VENDOR:</b></p> <p style="text-align: center;"><b>Measurement Incorporated</b>          _____          Firm Name</p> <p style="text-align: center;">_____          Authorized Agent Signature</p> <p style="text-align: center;">_____          Authorized Agent (Print or Type)</p> <p style="text-align: center;">_____          Date</p>	<p><b>FOR THE STATE:</b></p> <p style="text-align: center;">_____          Signature  <b>Kristi L. B. Thompson, Director</b>          _____          Name/Title  <b>Services Division, Purchasing Operations</b>          _____          Division</p> <p style="text-align: center;">_____          Date</p>
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**STATE OF MICHIGAN**  
**Department of Management and Budget**  
**Purchasing Operations**

Contract No. 071B8200260

Department of Education for the State of Michigan's High Schools:  
Administration of Michigan-Developed Assessments for the Michigan Merit Examination

Buyer Name: Lance Kingsbury  
Telephone Number: 517.241.3768  
E-Mail Address: kingsburyl@michigan.gov



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## **Article 1 – Statement of Work (SOW)**

### **1.000 Project Identification**

#### **1.001 Project Request**

The purpose of this Contract is to provide the materials and processes to administer and score the Michigan-Developed Assessments as components of the Michigan Department of Education (MDE) Office of Educational Assessment and Accountability (OEAA) Michigan Merit Examination (MME) for the school years 2008-2009, 2009-2010, and 2010-2011. The Contractor will also provide reports for combined scores from all components of MME results to various interested parties as well as to include College Entrance and Work Skills scores on the combined score reports.

The MME Administration Contractor for the Michigan-Developed Assessments (the Contractor) must work closely with the OEAA, the MME Accommodations Contractor (the Accommodations Contractor), and the MME Administration Contractor for the College-Entrance and Work-Skills tests. Together, these tests and assessments comprise all components of the MME.

All MME tests are administered to high school students on three (3) consecutive days in March (see MME Schedule, Appendix B). Appropriate accommodations and make-up testing is provided according to federal and state legislation. Standards-based results for all MME components are planned as integrated sets of reports to satisfy state and federal legislative requirements. The primary tasks for the MME Contractor are provided below.

The Contractor must address a number of main supporting tasks for the MME, which include the following:

- Use a coordinated approach with other MME Contractors and MDE staff to create a schedule for assessment administration, scheduling all tasks, subtasks, and activities for the Michigan-Developed Assessments, which are to be conducted over the three (3) year period of this Contract.
- Provide plans and activities in the schedule for incorporating all of Michigan's state-approved accommodations (for both students with disabilities and English language learners) into appropriate materials and administration processes for all Michigan-Developed Assessments
- Receive from the MME Development Contractor camera-ready electronic files of the Michigan-Developed components of the MME.
- Field-test all newly-developed items embedded by the MME Development Contractor.
- Provide leadership and coordination for MME standard setting. (Standard setting for science is anticipated in the 2008-2009 school year and standard setting for social studies is anticipated for the 2009-2010 school year.)
- Use initial design and layout of machine-scannable documents provided by the MME Development Contractor to develop, proof, and print all Michigan-developed, machine-scannable assessment documents.
- Use press-optimized files provided by the MME Development Contractor to print all Michigan-Developed Assessment booklets.
- Package and ship all testing materials for the Michigan-Developed Assessments to all sites that will administer the MME, using the OEAA materials ordering information; supply prescribed data files to OEAA related to packaging and distribution.
- Provide coordinated comprehensive assessment administration training to high school educators (with the MME Administration Contractor for College-Entrance and Work-Skills Tests) designated to administer or proctor the Michigan-Developed Assessments to high school students.
- Provide trained support to the Department in answering test administration questions from local educators.



- Scan student answer documents for the Michigan-Developed Assessments and provide scanned images of the student answer documents to OEAA.
- Score student responses to multiple-choice and constructed-response items.
- Receive scored data from the MME Administration Contractor for College-Entrance and Work-Skills Tests and combine with scored data from the Michigan-Developed Assessments into a single record for each student.
- Merge College-Entrance and Work-Skills test files of student record data (by student barcode label) from the MME Administration Contractor for College-Entrance and Work-Skills Tests into a combined student file for OEAA hosting of Tested Roster on the state's secure website.
- Provide combined files of student record data (by student barcode label) and scored responses (e.g. 0/1/2/3/4/... and comment or condition codes) in a prescribed format to the MME Administration Contractor for College-Entrance and Work-Skills Tests for conducting the first phase of item analyses while the Tested Roster is hosted.
- Overlay updated information to MME Administration Contractor for College-Entrance and Work-Skills Tests to perform second set of psychometric analyses to produce student file of combined scale scores for all MME components at the conclusion of tested roster.
- Receive scale scores and performance levels with UICs and barcodes for each student from the MME Administration Contractor for College-Entrance and Work-Skills Tests in two (2) rounds (an initial batch including the vast majority of students and a clean-up batch including the remainder of students whose results were delayed for any reason).
- Insert the scale scores and performance levels back in to the combined student data file using barcodes and UICs to match the scale scores and performance levels to the correct students.
- Utilize the combined student file including scale scores and performance level data for all MME components to produce .pdfs and hard copies of standards-based reports for parents, students, educators and the public (that incorporates the college-entrance and work-skills tests with the Michigan-Developed Assessments); and to provide the state with electronic student data files and aggregate data files for each assessment administration.
- Assure that all data elements present on MME reports are also available in student data files and/or aggregate data files.
- Utilize resources to support the State in making any adjustments needed in the MME due to changes in state or Federal law or policy, including potential responses to changes in NCLB, state testing requirements, or high school reform efforts.

The Contractor will work collaboratively with other MME Administration Contractors and the OEAA to ensure that all administration tasks are completed with high standards of quality. These tasks include production of all assessment materials; as well as packaging, distribution and retrieval of assessment materials; and security measures at all stages of tasks performed by the Contractor. Scoring, analysis, documentation and electronic data management of items, forms, scoring elements for reporting purposes, and reporting of results are all components of assessment administration.

The development of Michigan-Developed items is not part of this Contract. Instead, the Development Contractor will, via the MDE, deliver press-optimized files of all assessment booklets and initial design and layout of all scannable assessment materials to this Contractor for inclusion in assessment booklets (currently mathematics, social studies and science).

Major technical and procedural issues inherent in the development of items and administration of the OEAA assessments must also be addressed by the Contractor with final policy decisions made by the OEAA, MDE, and Michigan's State Board of Education.



## 1.002 Background

### Statistical and Other Properties of the MME Assessments

#### No Child Left Behind Peer Review Criteria

Because the State of Michigan needs to comply with the U.S. Department of Education (USED) guidance for full approval of the MME, it is imperative that the Contractor's assessments are most likely to be accepted and approved by the USED. Each of the issues listed below are drawn from the "Standards and Assessment Peer Review Guidance, April 28, 2004," available from the U.S. Department of Education at their website: (<http://www.ed.gov/policy/elsec/guid/saaprguidance.doc>).

The sections below are excerpted from this document. This is followed by additional technical requirements.

1. Academic achievement standards in ELA and mathematics: See Section 1.104.G.3 regarding Standard Setting.
2. Academic achievement standards in science: See Section 1.104.G.3 regarding Standard Setting.
3. Achievement standards at three (3) levels: See Section 1.104.G.3 regarding Standard Setting.
4. Applied to all students: See Section 1.104.G.3 regarding Standard Setting.
5. Alignment of content and achievement standards: Alignment is primarily a matter of aligning State content with instrument development and is therefore the purview of the Development Contractor. There are, however, points at which the Contractor's work intersects with this task. Specifically, in scoring and standard setting, the Contractor will play a key role in maintaining the alignment that was initiated by the Development Contractor.

Scoring – Scoring guides for constructed-response items will reflect the content standards in that the Contractor's scoring rubrics will emphasize the same points and in the same order as the State content standards. The Contractor will train readers to apply these rubrics in a consistent manner and monitor the process to make sure they do.

Standard setting – The basis for all standard setting will be the performance level descriptors (PLDs) developed by Michigan educators to reflect the State content standards. The Contractor will use these PLDs in all phases of standard setting and make sure that all cut scores clearly and accurately reflect the PLDs.

6. Diverse stakeholders involved: In selecting prospective standard setting participants, the Contractor will work with OEAA to identify a pool of Michigan educators that represents the diversity of the State as a whole.
7. Matrix design: See Section 1.104.T regarding psychometric and non-psychometric analyses.
8. Coherent information: See Section 1.104.K regarding the design and production of reports.
9. Comparability of results: The Contractor will cooperate with the Accommodation Contractor so accurate comparable information can be produced.
10. Multiple measures: If applicable, the Contractor will employ multiple measures in the content areas of the MME.
11. Validity: The Contractor's scoring procedures and reporting structures will be designed to ensure consistency with the domain structures of the Michigan standards and benchmarks. Scoring and IT staff will work with the OEAA to develop and/or modify procedures that specifically meet the needs of the State. Also see Sections 1.104.D, 1.104.J, 1.104.K, 1.104.L, and 1.104.Q of this Contract.



12. Reliability: The Contractor's psychometricians can and will, at the request of the OEAA, employ the Cronbach's alpha option with SAS PROC CORR to produce reliability coefficients for whole tests or parts of tests after test administration and calculate standard errors of measurement. In addition, the Contractor can conduct generalizability (G) and dependability (D) studies. The Contractor has typically used Brennan's various GENOVA programs. Recently, he has extended the ideas embedded in GENOVA to a new dimension that incorporates item response theory (IRT). The new family of programs, IRT-Class, allows the user to analyze decision consistency for multiple cut scores and assumptions about the score distributions. Most importantly, IRT-Class yields results that are directly applicable to NCLB reporting requirements. In addition to reliability estimates of internal consistency, the Contractor will provide information demonstrating the reliability of raters who hand-score constructed-response items.
13. Fair and accessible assessment system: The Contractor will cooperate with the Accommodations Contractor to ensure that the components used in the MME are fair and accessible to all students, including students with disabilities and limited English proficiency.
14. Consistent Interpretation: If applicable, the Contractor will ensure that the components used in the MME will have consistent information across forms.
15. Clear criteria for administration, scoring and analysis: See Sections 1.104.D, 1.104.J, and 1.104.K for more information.
16. Use of accommodations: The Contractor will cooperate with the Accommodation Contractor as needed.
17. Alignment: See number five (5) above.
18. Comprehensive alignment: The Contractor will cooperate with the Administration of College-Entrance and Work-Skills Tests contractor to make sure there is integration of the Michigan-Developed component and other components of the MME. To the extent that the developers of the components have aligned them with state standards, the Contractor can maintain that alignment through thorough training of readers of the constructed-response items and through careful planning and execution of standard-setting activities.
19. Content and process alignment: The Contractor controls the application of depth of knowledge concepts through hand-scoring and standard setting. At hand-scoring, range-finding and training, the Contractor will stress the higher order thinking skills OEAA is trying to emphasize in the State standards. At standard setting, the Contractor will emphasize these skills in the PLDs and make sure all standard setters thoroughly understand and consistently apply these PLDs as they set standards.
20. Same degree and pattern of emphasis: If applicable, the Contractor will comment on the test blueprints and make recommendations to the OEAA when it appears that the tests do not conform to State specifications.
21. Full range of skills: If applicable, the Contractor will comment on the range of skills reflected in the items of each test and also exercise their opportunity to influence this issue in range-finding, hand-scoring, and standard setting.
22. Scores expressed in terms of achievement standards: See Section 1.104.G.3 regarding standard setting and Section 1.104.K regarding a description of score reports.
23. Maintain alignment: The Contractor will maintain alignment primarily through scorer training and monitoring and standard setting. The Contractor will work cooperatively with OEAA staff during range-finding to make sure the appropriate skills are stressed at each score point, thoroughly train readers to apply these score points, and emphasize the appropriate skills and knowledge levels during all aspects of standard setting.
24. Participation of all students with disabilities: The Contractor will cooperate with the Accommodation Contractor as needed.
25. Participation of English language learners: The Contractor will cooperate with the Accommodation Contractor as needed.



26. Migrant students: The Contractor will work with the OEAA and the Development Contractor to design scannable answer documents that meet the needs of the State. Demographic information, such as migrant student status, is easily captured on such documents. See Section 1.104.D.10 regarding the development and production of scannable answer documents.
27. Appropriate, credible, and defensible interpretation of assessment data: See section 1.104.K regarding the production of reports; and Section 1.104.Q regarding quality assurance procedures.
28. Individual interpretive, descriptive, and diagnostic reports: See Section 1.104.K regarding a description of score reports for the Michigan-Developed Assessments.
29. Confidentiality: The Contractor will take all necessary precautions to ensure that student data is protected as directed by Family Educational Rights and Privacy Act (FERPA) and other pertinent laws. The Contractor will ensure the confidentiality of MME results and the privacy of student information by incorporating the following aspects: Secure databases for all test results and student demographic data, with access limited to necessary project personnel; Secure transmission of data and reports when transferring or downloading data from one location to another; Delivery of information only to persons previously authorized by the State; Secure storage of answer documents; Secure destruction of answer documents and electronic data archives, when appropriate, as determined by the State.
30. Itemized score reports: See Section 1.104.K regarding a description of score reports for the Michigan-Developed Assessments.

#### Additional Technical and Other Issues

31. Item difficulty distribution: The Contractor's psychometricians can and will, at the request of the OEAA, provide information regarding the distribution of item difficulties for a statistically-representative sample of students who have taken the Michigan-Developed Assessments. The Contractor will work with OEAA to define a sample of students to be analyzed; the IT staff will obtain the data for the sample and deliver it in a file to MI psychometric staff to perform the analysis. MI psychometric staff will analyze the data specific to the sample of students. For classical item statistics, SAS will be used. For IRT analyses, WINSTEPS will be used. Microsoft Excel will be used to arrange results from other analyses into readable summary sheets. The Contractor's psychometricians will summarize the range of item difficulties for the selected sample and provide whatever information, in whatever form, the OEAA and/or TAC requests. At a minimum, summaries showing numbers of items in each of several categories based on a range of difficulty. Particularly, if the Contractor is attempting to map items to Plods for standard setting and maintain a bank of items that would continue to support more than one cut score, the Contractor would arrange in advance with OEAA staff what those ranges should look like, confer with OEAA staff and the Development Contractor on a regular basis, and monitor the progression of the banks.
32. Item distribution by Michigan standard and benchmark: The Contractor will prepare data regarding item difficulties in order to determine the extent to which the MME components can accurately categorize students into four (4) levels of proficiency and non-proficiency; see Section 1.104.G.3 regarding a discussion of standard setting. The Contractor's psychometricians will analyze the item difficulty data with regard to individual Michigan standards and benchmarks, and report back to the OEAA, providing results and recommendations in a pre-determined format.
33. Research File: The Contractor will be responsible for producing combined student files using data from all MME components (see Sections 1.104.K and 1.104.L). Using these combined records, the Contractor will work with the OEAA to define a statistically-representative sample of Michigan students and provide a research file as described above to facilitate the State's desire to compare student test results across the range of educational assessments that comprise the State's system.
34. Content Alignment Studies: Deleted N/A.



35. Concordance tables: The Contractor will be responsible for producing combined student files using data from all MME components. The Contractor's psychometricians will be able to use these comprehensive data to provide the OEAA of an analysis explicating the statistical relationship among students' scores on the MME components and the assessment as a whole. The Contractor will work with the OEAA to develop an analysis plan that suits State needs.
36. Standard setting: As noted in number 37, the Contractor will be able to create large data matrices consisting of responses to items on all components. These matrices, once analyzed with IRT procedures, will allow the Contractor to express scores on one (1) component in a manner that corresponds to scores on other components. The Contractor can link scores on Michigan-Developed tests to those on College-Entrance tests, not so much to equate cut scores or categories (pass/fail, etc.), but to project scores on one (1) test based on scores on the other.
37. Blending of college entrance tests and state assessment programs: With specific respect to blending of results, the Contractor will create data matrices consisting of responses to all components for a common group of students, determine the underlying structure, create meaningful variable names based on that structure, and assign scores for those variables, which may be in addition to or instead of component names.
38. Accessibility of the assessments for visually-impaired students: The Contractor will cooperate with the Accommodation Contractor.
39. Student motivation: The Contractor will endeavor to make layout, cover design and other physical characteristics of the test booklets engaging. The Contractor will also engage in a campaign of public relations using print and electronic materials approved by the OEAA.
40. Test similarity: The Contractor will work with the Development Contractor to arrive at a mutually agreeable set of specifications.
41. Work-skills tests: Deleted N/A.

#### 1.100 Scope of Work and Deliverables

##### **1.101 In Scope**

The following pertains to all assessments related to this Contract:

1. Coordinate, in good faith, all transition tasks with the current MME Administration, any other MME Administration, and any successor MME (or successor program) Administration Contractor(s) as well as with current and future MME Development Contractors (Section 1.104.B).
2. Maintain assessment cycle schedules and timelines to meet the deliverables described in Section 1.104 for the MME (Section 1.104.O).
3. Coordinate with OEAA and other MME Contractor(s) to design assessment materials, reports, and applicable portions of technical reports for the MME (Sections 1.104.D, 1.104.K, and 1.104.S).
4. Produce all assessment materials required by Section 1.104 to the specification illustrated in Appendix A and/or as amended by the OEAA CCI based on the final design of each assessment cycle from the OEAA assessment development staff.
5. Prepare and produce test booklets and answer folders for MME Michigan-Developed Components that meet OEAA specifications as components of the MME, particularly to give all components of the MME the clear appearance of being portions of an overall MME assessment program (Section 1.104.D).
6. Deleted N/A.
7. Use the Technical Environment described in Section 1.103 and coordinating with its own technical environment, the Contractor will pre-identify student answer documents for the Michigan-Developed components given on day three (3) (Sections 1.103 and 1.104.D).
8. Provide, perform, and track the delivery and retrieval of all Michigan-Developed testing materials (including overall MME reports) to OEAA, schools and/or districts (Sections 1.104.J and 1.104.K).
9. Scan all answer documents and related scannable testing materials for Michigan-Developed tests (Sections 1.104.D.33 and 1.104.J)



10. Provide and perform accurate machine and hand-scoring services on Michigan-Developed testing materials (Sections 1.104.D.34, 1.104.D.41, and 1.104.G.2).
11. Work with OEAA staff to create and produce accurate standard reports for overall MME scores (Sections 1.104.D.12 and 1.104.K).
12. Receive scored data from the MME Administration Contractor for College-Entrance and Work-Skills Tests for combining all test data into a single record for each student (Section 1.104.K).
13. Create combined records for individual students, and transfer those records to the MME Administration Contractor for College-Entrance and Work-Skills Tests for psychometric analysis in two (2) batches (an initial batch comprising the vast majority of students taking the MME, and a clean-up batch with students whose records were delayed for any reason) (Section 1.104.K).
14. Provide files of student record data (by student barcode label) in a prescribed format to merge into a combined student file for OEAA hosting of Tested Roster on the state's secure website (Section 1.104.K).
15. Utilize updated student demographics (including barcode) for producing overall MME reports (Section 1.104.K).
16. Work with OEAA, the Development Contractor and the Administration Contractor for College-Entrance and Work-Skills tests staff to transfer item, student, and report data at agreed upon times throughout each cycle (Sections 1.104.B and 1.104.K).
17. Attend Technical Advisory Committee (TAC) meetings as described in section 1.104.G to address issues related to the MME (Sections 1.104.G.4 and 1.104.R).
18. Deliver and retrieve all Michigan-Developed Assessment materials as described within this Contract (Section 1.104.J).
19. Process and score all returned answer documents for Michigan-Developed components of the MME (Sections 1.104.D and 1.104.J).
20. Provide to the MME Administration Contractor for College Entrance and Work Skills Tests combined multiple-choice and constructed-response scores to produce combined results (scale scores) for each test area and student, so that the Contractor can perform all psychometric procedures to validate item scores and to estimate individual student scale scores (Section 1.104.K).
21. Produce and deliver the overall MME test results reports to schools (section 1.104.K).
22. Collaborate with the MME Administration Contractor for College-Entrance and Work-Skills Tests in preparing the technical report (described in section 1.104.S) that incorporates all components of the MME (Sections 1.104.D.45 and 1.104.S).

### 1.102 Out of Scope

The following is considered outside the scope of this Contract:

- The administration of any assessment that is not part of the MME Michigan-Developed components.
- The administration of any MEAP tests at the elementary, middle, and high school levels.
- The administration of any MI-Access, or ELPA assessments (translated and accommodated versions of the MME College-Entrance and Work-Skills tests are within the scope of this Contract).
- The development of assessment items for the College-Entrance or Work-Skills assessments used in the MME.
- Development and duplication of Braille, enlarged print, and ELL versions of the MME Michigan-Developed Component. Although this Contractor will be responsible for receiving these from the Accommodations Contractor and distributing these to schools.
- Design and update the MME assessment administration manuals and the guide to reports to a print-optimized format. Although this Contractor will be responsible for receiving these from the Accommodations Contractor, as well as printing and distributing these to schools.

### 1.103 Technical Environment

This section addresses the information technology environment requirements of this Contract (see Appendix D regarding the State's technology environment).

The Contractor's technology environment must be compatible with the State's technology environment, as noted below:

- Hardware architecture
- Storage architecture (including database and file storage)
- Software architecture
- Graphics solutions
- Security architecture (see section 1.104.R)
- Audit tracking for database management system and all file handling



- Backup and Recovery solution and processes (including redundant storage, retention schedules, recovery processes and timeframes)
- Disaster recovery solution (including any off-site storage solution and locations for disaster recovery and retention schedules)
- Growth capacity.
- Include uptime availability for technical hosting environments that will be implemented with this Contract.

**NOTE:** each of these strategies must be implemented upon the start date of this Contract.

All software used must be compatible with MDE software for products.

In addition, the Contractor will need to provide a dedicated toll-free telephone number in effect during the duration of this Contract, between the hours of 8:00 a.m. and 5 p.m., Eastern Standard Time/Eastern Daylight Savings Time (EST/EDT). This number will be used by Michigan school district personnel to inquire about issues related to the administration, scoring, and reporting of the Michigan-Developed Assessments. The Contractor and their staff must be available 8 a.m. to 5 p.m. EST/EDT Monday through Friday. In addition, the Contractor will need to provide a dedicated email address. This email address will be used by Michigan school district personnel to inquire about issues related to the administration, scoring, and reporting of the Michigan-Developed Assessments (see Section 1.104.N for call center information).

The Contractor's technology and infrastructure, as described below, is currently in place and is available to implement and support the technical issues described in this Contract. The Contractor's array of hardware and software assets will allow the Contractor to efficiently meet the needs and requirements of MME and process student test materials in a timely manner. The Contractor has placed great emphasis on modularity and flexibility in all areas of our technology design and implementation. These characteristics are ideal for facilitating a seamless transition between MDE's current computing and processing configuration to our architecture for all processing needs.

**Printing hardware architecture.** The architecture of the Integrated Document Processing Facility (IDMF) is based upon grid computing concepts implemented in a Microsoft .NET infrastructure with Microsoft SQL Server back-end. The Contractor's IDMF workflow divides each processing task into subtasks that are then allocated to processing machines. Each processing system runs one (1) or more specific tasks (i.e. file receipt, document composition, etc). Upon startup, each task connects and registers with the master that identifies it and indicates that it is ready to process work. This allows the IDMF system to quickly scale with additional capacity by adding new systems running modules as processing needs require. Each system communicates with the master every five (5) minutes as part of a "heart-beat" process. In the event that a system misses a heart-beat connection, it is declared dead and their work is reassigned to another system. The hardware infrastructure consists of clustered database servers connected to an EMC SAN over a fiber backbone.

**The Contractor hardware architecture.** All core network connectivity is implemented at Gigabit speeds through MultiMode fibre connections and is fully and automatically redundant through the use of a mix of fault tolerant protocols. Similarly, the existing 125+ servers are redundant at critical points. Technologies such as clustering and load balancing with F5 Network appliances are employed to maximize uptime. Some of these same technologies allow the Contractor to expand network service capabilities rapidly by simply adding new hardware to existing resources. This approach also allows for maintenance, repairs, and needed software patches to be applied routinely without impacting operational requirements. In addition, base assets include approximately 2000 desktop PCs and thin-clients that the Contractor can supplement with hundreds of leased machines built to our specifications to meet demand during peak operational windows.

**Scanning hardware.** The Contractor owns nine Pearson/NCS OpScan21 optical mark reader scanners. Eight (8) of these scanners are rated to scan 10,000 sheets per hour. The ninth is rated at 7,500 sheets per hour. The OpScan 21 system offers the latest in sophisticated technical design for speed, accuracy, and ease of operation. Both sides of the sheet are reflectively scanned in one (1) pass. Responses are measured using 16 levels of light/dark that allows the system to accurately differentiate valid marks from smudges and erasures. The OpScan21, with its automatic feed feature and ability to direct output to any of three (3) stackers, allows the efficient sorting of documents.



The Contractor will image scan all pages of a student's answer document at the same time. The Contractor currently has 11 BancTec® IntelliScan® XDS color image scanners which should provide ample image scanning capacity. The BancTec® IntelliScan® XDS is rated to scan 190 sheets per minute at an optical resolution of 240 dots per inch (DPI) and creates both JPEG and TIFF images for every page. These scanners utilize precision camera assemblies pressurized to minimize dust. This, plus low maintenance LED camera illumination, reduces the need for rescans. The BancTec® IntelliScan® XDS scanner features a completely open paper path to dramatically improve document throughput. This paper path reduces the time to recover from paper jams and other complications that are common for scanners with more restrictive paper paths. Both sonic and vacuum double-sheet detection technology ensure that every sheet is scanned, allowing reliable interspersed scanning of multi-sized documents. In addition, BancTec has designed custom document integrity software for the Contractor. This application detects out-of-sequence pages. The scanner will stop to allow operator correction before imaging, thus eliminating post scanning corrective action.

**Additional Printing hardware.** The Contractor has an array of printers to efficiently print high quality reports on continuous forms and cut sheets. Printing equipment includes:

- (3) Canon ImageRunner 105
- (3) HP LaserJet 9050
- (3) IBM Model 6400
- (2) Xerox DocuTech 6155 HC
- (5) Xerox DocuTech 6155
- (1) Xerox Nuvera 144
- (1) Xerox DocuColor 7000
- (2) Xerox 92C HC
- (1) Xerox 75 MX
- (2) Xerox DocuTech 100 MX
- (2) OCE VarioStream 7400 BW
- (1) Océ VarioStream 9220
- (2) OCE Pagestream 372
- (3) Solimar Print Server
- (2) Emtex VIP Servers

#### **Software architecture.**

**Security barcode check-in application (SBCA).** SBCA allows warehouse personnel to efficiently check in secure test materials received from the schools. They scan either the security barcode on individual secure materials or the security barcode located on the outside of a pack of intact shrink-wrapped documents. Scanning the security barcode on the shrink-wrapped pack is equivalent to scanning all the individual security barcodes included in the shrink-pack. This provides efficiency and minimizes the human error associated with scanning all individual test materials in the shrink-pack. As each security barcode is scanned, it is checked against the original list of barcodes that were entered into the database prior to shipment. Any discrepancies are noted and a Security Report is generated, as required. This report is used to inform districts of any secure materials that have not been returned to the Contractor.

**ObjectTracker.** The Contractor is committed to ensuring that all testing materials are correctly transported, checked in, processed, and reported. To monitor the flow of materials from districts to the Contractor and through all phases of processing, the Contractor has developed a suite of tracking applications known collectively as ObjectTracker. This software allows the user to monitor the shipment of materials from a district to the Contractor receiving facility. The tracking information lets the Contractor determine whether a package has left the district, is in transit, or has been delivered to the Contractor. An initial scan of all package tracking numbers into ObjectTracker creates a second verification that a package has arrived at our site.

Once the packages are checked in at the Contractor, the contents are verified, associated with the correct district and school, placed in a Contractor tote box, and entered into the ObjectTracker system. Contents of a tote box can be linked to the original shipping tracking number through an association with the Contractor tote box barcode. After the contents of the tote box are processed, an association is created between the materials and the tote box. This association can be used to locate any student document throughout the remaining phases of processing.



The Contractor tote box barcodes are scanned at each stage of processing. The system logs the time when and the location where the tote box is scanned and internal reports are provided to monitor the progress of the boxes. If a tote box is not scanned at the next station, the tote box is flagged for investigation. Daily reports are emailed to department heads detailing the last days scan counts at each location.

**General Processing System.** To achieve the highest level of performance and reliability during processing and scoring, the Contractor uses proprietary software called the General Processing System (GPS). GPS is designed in a modular fashion to provide maximum flexibility while reducing the complexity by implementing the processing of a task as a single module. The utilization of each module is controlled through a central scheduling application. This design requires fewer individuals to manage the processing of an assessment by scheduling reoccurring tasks to execute routinely. It is also extremely flexible allowing project staff to incorporate only the required functionality in the final solution.

GPS's functionality is made possible through the use of a comprehensive project database. The database has been designed to ensure that all project information and data relationships can be utilized in all phases of processing. The project database, coupled with the functionality of GPS, allows the project staff to control the creation and printing of labels, import of scan data, data validation and correction, creation and printing of packet checklists and packet coversheets, exception reporting, multiple choice scoring, data extractions, and final report data generation.

**Data correction application.** The Contractor's software development team performs several post-scanning verifications to provide the highest quality data. These verification routines isolate and activate a review flag for records containing duplicate barcodes across batches, double marks, low number of responses by a student, and embedded/leading spaces.

To review suspect data fields, the Contractor has developed a comprehensive data correction application that identifies all documents requiring review. The data correction application is modeled after the same process that is utilized in scoring constructed responses. Two separate data correction operators review each questionable field; if the change suggested by the operators is not an exact match, the item is flagged for a third review. The third review is performed by a senior data correction operator and becomes the final result. If the operator determines a change is not required, he/she is required to supply an explanation that is reviewed by software development staff as a final verification.

The data correction application is only available in a supervised location that requires each operator to be authenticated with a user ID and password. The application configuration allows the lead programmer to restrict access to only flagged fields, which adds additional security.

**The Virtual Scoring Center™ System.** In 2002, the Contractor unveiled the Virtual Scoring Center™ (VSC™) system, a complete electronic data-capture and image-based scoring solution. The VSC system is composed of two (2) primary subsystems:

VSC Capture™ is a workstation-based system for acquiring images and decoding student demographic information and student responses by reading DMR bubbles (and other types of form fields).

VSC Score™ is a web-based environment for scoring constructed-response items. The details of VSC Score™ may be found in section 1.104.G.

**The VSC Capture™ subsystem.** Unlike proprietary OMR (Optical Mark Read) solutions that require extremely strict tolerances to ensure proper alignment between the physical form and the scanner, VSC Capture™ adjusts—electronically—the positioning of the scanned image to conform to a pre-defined master reference document. As a result, VSC Capture™ eliminates the need for expensive and proprietary OMR scanning solutions and the limitations they impose.

VSC Capture™ is designed to work with most commercial-grade, high-capacity digital scanner capable of supporting 256 levels of gray and producing output at resolutions of 200 dots per inch (DPI) or higher. For its projects, the Contractor uses BancTec® IntelliScan® XDS color image scanners. These are duplex scanners that create Group 4 bitonal TIFF and eight-bit JPEG grayscale and color images at 200-300 DPI. Throughput is rated at 190 sheets per minute or 380 images per minute at 240 DPI with letter-size documents. The Contractor currently has 11 BancTec® IntelliScan® XDS color image scanners which should provide ample image scanning capacity as well as room for growth. When using all 11 BancTec scanners, the Contractor will be capable of generating over 205,000 full-page images per hour. The Contractor uses BancTec's SpeedFIRST™ scanning software to scan the forms and produce an index file of scanned images.



The VSC Capture™ workflow provides an efficient and highly reliable process for the accurate decoding of student response data. This proven decoding process ensures a precise conversion of bubbled information into electronic data files of student response and demographic information. Steps in the process are described below:

**VSC Document Setup™.** Before scanning used test booklets and/or answer documents, a blank image of each page in a test form is captured and imported into the system. Using this image, the Contractor technician defines all relevant data collection areas (including demographics and barcodes), as well as any identifying information (such as lithocodes or unique page identifiers). In addition, business and edit rules can be defined that will govern how the marks will be decoded (e.g. specifying the values a set of bubbles will return). The resulting Form Definition file becomes a master reference to which the completed forms will be compared during production scanning and image processing.

**VSC Image Processor™.** Completed test forms are scanned into the system to produce indexed, "full-size", TIFF images of the entire document that relate the lithocode and page number of each document to the corresponding TIFF image of the page. The Contractor does not create templates or utilize a dropout process. Although bitonal TIFF images are also generated, internally the VSC Capture™ system uses grayscale JPEG images due to their superior tonal qualities. During the Image Processing phase, VSC Capture™ performs the following functions:

- Conducts form identification (matching images with their master Form Definition file using unique page identifiers or other characteristics).
- Aligns the image (automatically adjusting for stretch, skew, and other variations that might impact the accuracy of the decoding process).
- Reads data collection areas (e.g. bubbles) using Digital Mark Recognition™ (DMR®) technology. The DMR® technology evaluates each bubble and assigns a value on a 16-point scale. The scale represents the darkness/completeness of each mark and, consequently, the system's degree of confidence that the student intended the mark.
- Resolves all bubble marks to a single value based on edit and business rules defined during the document setup process. If the decoder is unable to resolve an item to a single value (double bubbles), or if errors occur (e.g. required fields are missing), the data and the corresponding image are staged for data correction.

The resulting data file along with all identifying information (and a pointer to the image) is passed along to the next process.

**VSC Batch Editor™.** Using the VSC Batch Editor™, booklet integrity is verified to ensure that all required pages are present in the proper order for each document in a scanning batch. A batch editor operator can easily correct problems (such as extraneous sheets of paper) by viewing the problem images onscreen, and repositioning or removing the extra sheets. Images can be reordered in a stack or, if necessary, pages can be rescanned and reinserted into a batch.

**Storage architecture.** The Contractor recognizes the need for creative strategies to support the storage of millions of imaged documents. As such, the Contractor's strategy is to implement modular nodes within Storage Area Networks (SANs) to supplement our more traditional internal server storage, externally attached server storage, and Network Attached Storage (NAS) solutions. By utilizing a backend, fibre-channel-based SAN solution for storage, the Contractor is able to expand, reallocate, and otherwise manage storage resources in a manner that is seamless to the Local Area Network (LAN) and the end user. Our SANs are implemented utilizing industry leading technologies from HP and Network Appliance. Current capacity exceeds 120 terabytes. To maximize storage resources, we constantly migrate aged data to alternative long-term storage options such as Ultrium tapes, CDs, and DVDs.

All production database storage utilizes Redundant Array of Independent Devices (RAID) technology. Data storage is kept separate from transaction log storage to provide a safe recovery strategy as well as to increase system performance. The Contractor's database administrators monitor, analyze, and correct any issue that could impact allocated storage space or system performance. Daily automatic indexing of the databases is implemented to keep system response times optimal. Daily archives are made and stored on a secondary storage device. These archives are moved to tape in order to create a complete chronological listing of database events.

**Graphics architecture.** The Contractor uses a variety of graphics packages including Adobe Creative Suite 3 (CS3), which includes InDesign, Illustrator, Photoshop, Acrobat. The Contractor also uses QuarkXPress 6.1.



**Network infrastructure and security.** The Contractor recognizes the importance of security in establishing and maintaining standards of technical quality, perceived fairness, integrity, and public confidence in the high-stakes nature of the Department assessments. The threats to security are substantial with the potential for students, media representatives, parents, competitors, and politically motivated individuals to seek unauthorized access to sensitive information. These threats can take on many forms, including direct network intrusion attempts, subversive data gathering, passive data mining, physical access attempts, viruses, and other malicious logic. One of the foundations for providing security in this environment is laid in the network and data security procedures, policies, and capabilities employed by the Contractor. At the heart of the system is the firewall implementation that allows the Contractor to block, audit, and respond to both internal and external threats. The Contractor currently employs 19 separate firewalls to provide layered and redundant protection. These firewalls utilize state-of-the-art deep packet inspection, port blocking, proxying, address translations, heuristics, and trend analysis to provide security. In addition, our firewalls are provided by multiple vendors, to provide complementary capabilities while limiting exposure to potential weaknesses associated with each implementation that might be exploited in the future.

The Contractor updates all defenses immediately as soon as emerging threats and countermeasures are identified. The Contractor also employs a Juniper Intrusion Detection System that allows rule sets to be automatically updated to block unwanted traffic in real-time whether the source is internal or external. To further complement these capabilities, the Contractor has deployed software that detects, removes, and destroys viruses, spyware, and other forms of malicious software. This software is updated at least daily through the use of automated means backed by constant monitoring by our network operations staff. The Contractor also routinely deploys security patches and updates for operating systems and commercial software through the use of a central update management server.

The structure of the Contractor's network is such that compartmentalization is an effective security measure as well. For instance, the web services that the Contractor provides require a greater level of accessibility than is required by many of our other services. To address this potential vulnerability, the Contractor has deployed these web services within our primary defenses, but in a separate, untrusted, domain from the main corporate network, and with additional layers of protection. Compartmentalization also allows us to divide our internal users on a need to know basis with access controlled between departmental and project related resources as well as discrete subnets within the network. Our internal networks users are monitored as well in a "trust but verify" approach that audits the actions of users and prevents the pass-through of undesired traffic. The Contractor has the ability to capture and record up to one (1) terabyte of network activity for later detailed analysis. Auditing such as this also allows the Contractor to monitor for irregular and illegal acts, providing reinforcement of our standards regarding acceptable and appropriate use as well.

Other details on security may be found in section 1.104.P.

**Database audit tracking.** All student demographic and score data changes are tracked through the use of a history table. An update trigger ensures all data field changes are logged in the history table. The table acts as a transaction log of all changes as well as an audit trail of the users making the change. This information is kept throughout the life of the project to ensure that a complete re-enactment of data changes can be reviewed. Historical archives are kept for the life of the project.

**Backup and recovery.** The Contractor recognizes the need for creative strategies to support the storage of millions of imaged documents. The Contractor's strategy is to implement modular nodes within Storage Area Networks (SANs) to supplement our more traditional internal server storage, externally attached server storage, and Network Attached Storage (NAS) solutions. By utilizing a backend, fibre-channel-based SAN solution for storage, the Contractor is able to expand, reallocate, and otherwise manage storage resources in a manner that is seamless to the Local Area Network (LAN) and the end user. Our SANs are implemented utilizing industry leading technologies from HP and Network Appliance. Current capacity exceeds 120 terabytes. To maximize storage resources, the Contractor constantly migrate aged data to alternative long-term storage options such as Ultrium tapes, CDs, and DVDs.

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Backup and recovery. In addition to the redundancy and fault tolerance outlined above, the Contractor employs time proven methods for data backups and disaster recovery. Several Ultrium tape autoloader solutions provide the mechanism for primary backups along with the latest snap-shot and off-site replication technologies. Once a week, all critical corporate data is backed up to tape, and an incremental backup is done every night to capture any changes or additions that occurred to data on the network in the previous 24 hours. Furthermore, the Contractor keeps weekly versions of backups for three (3) months, monthly backups for one (1) year, and yearly backups for 10 years. Since tape media will deteriorate over time, all yearly backups are transferred to DVD-R or DVD-RAM media rated at a 30 year shelf life. Weekly backups are transferred to secondary facilities and follow a similar rotation schedule.

To provide coverage for the immense task of backing up images, the Contractor will employ completely separate nodes on our SANs to store grayscale images while a project is active. The bitonal counterparts of these same images are backed up separately as well via various media as part of the data migration strategy outlined in our storage strategy. In the event that a request to restore data is received, a technician will respond by retrieving the items within one (1) business day if the data is contained on tape or a SAN node at the local facility. If the data resides on archived media or is located off-site, a period of up to five (5) business days may pass for non-critical restores. If the data restore is deemed critical, this restore will occur as rapidly as possible.

**Disaster recovery.** The Contractor has made significant investments in the equipment necessary to help limit the scope of impact should a disaster occur. These precautions include battery backup power, backup generators, and security systems. The Contractor has planned for a scenario in which the primary computing facility is no longer able to perform its role. The Contractor has a distributed corporate environment with multiple buildings on the primary campus as well as 12 geographically separated satellite offices. Most of these facilities are provisioned with the Internet bandwidth, electrical capacity, and network wiring to handle hundreds of additional computers or servers. All of these facilities have existing computer resources already in place that can be reallocated immediately for other duties. In addition, the Contractor has recognized the desirability of distributing some of their core computing hardware to another hosting facility. The Contractor has already finished outfitting their Greensboro, NC office to be able to house servers and other critical infrastructure. The Contractor has brought some of these resources online to provide regional redundancy and is in the process of bringing further resources online for regional load balancing to compliment their current capabilities. The Contractor will utilize a unique state-of-the-art replication technology that will allow not only near real-time database backups for critical applications, but also client data transactions at either location while still having a consolidated rendering of all the data. Finally, provisions are in place with key vendors to provide leased assets as temporary replacements on which to restore data from off-site storage if required. The Contractor will store original test documents at a separate facility from the primary computing facility.

**Growth capacity.** The Contractor's standard technical provision for projects is to have the expected resource requirements in place plus an additional 20 percent capacity. The Contractor's strategy for additional growth in capacity revolves around maintaining a core infrastructure that allows for additional resources to be added rapidly and seamlessly. Technologies such as clustering, load balancing, our status as an Autonomous System on the Internet, and state-of-the-art SANs allow this to happen. The design and implementation of the Contractor's network will allow the continuous growth modularly with no expected limitations on maximum capacity.

**Uptime availability for technical hosting environments.** The Contractor's strategy for uptime availability for technical hosting environments involves redundancy and reliability. The Contractor will test all proprietary software through a rigorous Quality Assurance (QA) review in a fully production representative environment before deployment. The Contractor's primary Internet hosting is done through a fully redundant fibre optic Sonet Ring that in turn is backed up by separate fiber connections to a completely different ISP. The Contractor is able to utilize both of these connections simultaneously or independently in the event of a problem. All routers, firewalls, and other key network equipment are also fully redundant. All Web servers are configured to participate in membership with one of our Web farms that work together to share loads and failover automatically in the event one (1) or more servers experience a failure. The Contractor's database servers are configured in clusters to provide automatic failover to other database servers. The Contractor's storage servers are interfaced with a storage area network that allows data to be accessed from other file servers in the event of any individual failure. The Contractor routinely exceeds 99% in overall availability excluding planned maintenance and upgrades. All strategies outlined in section 1.103 have already been implemented by the Contractor or will be by Contract award.

#### **1.104 Work and Deliverable**

The MME Administration Contractor for the Michigan-Developed Assessments of the MME shall provide services and staff, and otherwise do all things necessary for, or incidental to, the performance of work of this Contract as set forth below:



### **1.104.A General Description of OEAA Assessments**

All OEAA assessments (MME, MEAP, MI-Access, and ELPA) must be culturally fair in full consideration of Michigan's diverse student population. In design and content, the assessments should allow for maximum participation of students with disabilities and/or English language learners. Changes to assessment blueprints may dictate changes in the numbers and/or types of items on future forms of the assessments.

All OEAA assessments used must comply with state and federal laws, policies, and guidelines (i.e. NCLB, IDEA, ADA, and School Code). The Contractor must also be fully prepared to work with the state during the length of this Contract to address new or modified requirements of the federal and state governments. These laws, policies and guidelines may require changes that will be negotiated on an as needed basis. See section 1.403 for change control process. On occasion, when variations in assessment administration procedures have been reported during the assessment administration window, a parallel form of each assessment has been used to re-assess students. Therefore, an "emergency" form is needed for each assessment at each grade level. The same emergency form can be used for more than one (1) school year so long as the form remains secure. The Contractor is responsible for providing items for the emergency form. The Contractor must coordinate with the Development Contractor to create a new emergency form in the event that an emergency form is needed.

All OEAA assessments (MME, MEAP, MI-Access, and ELPA) must be based on sound psychometric designs that ensure curricular and instructional validity and yield scores that are reliable and valid measures of student achievement or proficiency as defined by the underlying frameworks upon which the assessments are designed (e.g. benchmarks, Grade Level Expectations (GLCEs) and Course Content Expectations (CCEs) for the MEAP and MME; extended GLCEs, extended CCEs and extended benchmarks for MI-Access); and English language proficiency standards for the ELPA. The overall assessment designs must address issues arising from the need for comparable year-to-year assessment results. To support high-stakes use of all OEAA assessments, the content of the assessments, including the scores produced, must be of the highest technical quality and must meet the requirements of the APA/AERA/NCME "Standards for Educational & Psychological Testing" (1999).

## **Michigan Merit Examination System**

### **Legislative Background**

As mentioned in Section 1.0 of this Contract, Public Acts 592-596 of 2004 were recently adopted by the Michigan Legislature to replace the High School ELA and mathematics assessments with a college entrance test. After the initial implementation of the MME in Spring 2007, all remaining peer review documentation was submitted to the U.S. Department of Education Title I program for approval. The current MME administration, scoring and reporting Contractor has worked with OEAA staff to implement needed changes in the MME program during the current three (3) year Contract period. With this Contract, the State will also negotiate any MME program changes with the Contractor if, and when, such changes are needed.

### **Michigan Merit Examination (MME Participants)**

Spring MME participants include all students enrolled in grade 11 and students in grade 12 who qualify for retesting. Retesting with the MME can assist students in meeting score requirements of the high school Michigan Promise Scholarship program to obtain a potential \$4000 scholarship, and students who are taking the MME for the first time. At the current time, about 135,000 high school students in grades 11-12 participate in the program.

### **MME Components**

The Michigan Merit Examination consists of the following:

- Assessment instruments that measure English language arts, mathematics, reading, and science and are used by colleges and universities in this state for entrance or placement purposes.
- One (1) or more tests from one (1) or more test developers that assess a pupil's ability to apply reading and mathematics (and possibly other) skills in a manner that is intended to allow employers to use the results in making employment decisions. This work skills component must also allow for students to become eligible for a work skills readiness appraisal.
- A social studies component.
- Any other component that is necessary to obtain the approval of the United States Department of Education to use the MME for the purposes of the federal No Child Left Behind Act of 2001, Public Law 107-110.



Currently, a small part of the writing, a larger part of the mathematics, half of the science, and all of the social studies components of the MME are Michigan-Developed, although solely College-Entrance tests may be considered for future use if sufficient alignment to Michigan's high school content expectations (HSCE) can be clearly and independently demonstrated. In addition, the MME Contractor for the College-Entrance and Work-Skills components will be responsible for coordinating these tests with the OEAA and the Contractor for Michigan-Developed Assessments, as well as the other components of the MME program. The decisions for the current MME components are based on the alignment study conducted by Dr. Norman Webb, University of Wisconsin, for the Michigan Department of Education (2005).

The grade 11 and 12 college-entrance test-based MME assessments in English language arts, mathematics, science, and social studies: For the purpose of planning for this Contract, it is anticipated that a College-Entrance Test will continue to be used as the major basis for the English language arts and the mathematics components. It is also anticipated that the State will continue to provide the science and the social studies components, and whatever augmented assessments are needed to maintain Federal approval status of the MME for the English language arts and mathematics assessments.

The MME is administered in the Spring of grade 11 each year. The State will pay the cost of the Spring grade 11 assessment, and currently will pay for one (1) retest for qualifying grade 12 students. These students should be permitted to retest in the spring of their senior year at state expense.

Currently, Auxiliary Test Centers are required to administer the Michigan-Developed components of the MME at the same dates and times indicated below. These Test Centers are for non-public school students that are unable to take the test at their own school, as well as for eligible-aged GED students. These Test Centers may be at mutually agreed upon sites on the same dates of administration as public schools. At least five (5) sites strategically placed around the State must be provided.

The assessment administration is planned to occur statewide on three (3) school days, with day one (1) devoted to all components of the College-Entrance test; day two (2) devoted to work-skills tests; and day three (3) devoted to the Michigan-Developed Assessments (science, social studies, mathematics, and any other assessments that the State would need to administer to supplement college-entrance and work-skills content). All three (3) assessment administration days will be school days. A three (3) day make-up period will be scheduled two (2) weeks later, also falling on three (3) school days. See Appendix B for MME Spring Testing Schedules.

#### **1.104.B Coordination with OEAA Contractors**

Multiple Contractors: The MME Administration Contractor for the College-Entrance and Work-Skills Tests will have the responsibility of coordinating with MME Administration Contractor for the Michigan-Developed Assessments and the MME Development Contractor, which will produce items for the Michigan-Developed Assessments of the MME.

MME Development Contractor: During the 2008-2009 and 2009-2010 school years, another Contractor is expected to be the MME Development Contractor (creating the test items and designing the test booklets).

General Coordination Responsibilities: The MME Development Contractor and both of the MME Administration Contractors have the responsibility for MME assessment booklet design. The MME Development Contractor will deliver press-optimized files for all non-scannable materials for the Michigan-Developed Assessments, along with initial design and layout of machine-scannable documents. The Contractor for the Michigan-Developed Assessments will develop, proof, and print the scannable documents for these assessments. Designs must be coordinated so that administration, scoring and reporting is streamlined, reliable and accurate, administration by school personnel is realistic, and costs are minimized. The MME Administration Contractors and the MME Development Contractor must have agreement on and ensure that all items and assessments comply with the OEAA style guide that identifies standards for all items and assessments and subject specific standards.

The Contractor staff will coordinate all Administration activities for the Michigan-Developed Assessments with other MME Contractors and the OEAA to provide a seamless flow of work and present no obstacle or barriers to quick and easy resolution of issues that may arise. Activities will include, but are not limited to, developing, proofing, and printing scannable documents for the Michigan-Developed Assessments; scoring and reporting results as requested by the OEAA; coordinating and /or participating in committee meetings; and performing and documenting select psychometric analyses for contributions to the Technical Reports. The Contractor will ensure that all items and assessments comply with the OEAA style guide as provided.



The Contractor will participate in a joint contract kick-off meeting, during which delineation of specific responsibilities may be further clarified by OEAA. The Contractor will work closely with OEAA and other contractors to develop and revise schedules for all tasks, with added focus on tasks that require close collaboration among contractors. The Contractor's project management team will then prepare a detailed report, with revised project schedule, and submit it to the OEAA for review and approval. Upon approval of the revised schedule, the Contractor will adopt it as a principal management tool for the project.

Throughout the life of this Contract, the updated schedule and assessment administration plan will serve as the guidelines for all tasks. The Contractor will prepare bi-weekly updates showing tasks completed, tasks coming up in the next quarter, and points of interaction among the contractors. The Contractor will remain in constant contact with OEAA and with the other MME Contractors to make sure that the Contractor is always working toward the same ends under coordinated procedures.

Coordination Responsibilities for Field-testing: The MME Development Contractor will be responsible for embedding field-test items in operational forms of the Michigan-Developed Assessments during the spring MME assessment cycle. Field-testing is the final round of item tryouts and is the only round of tryouts in which the Contractor for the Michigan-Developed Assessments is involved.

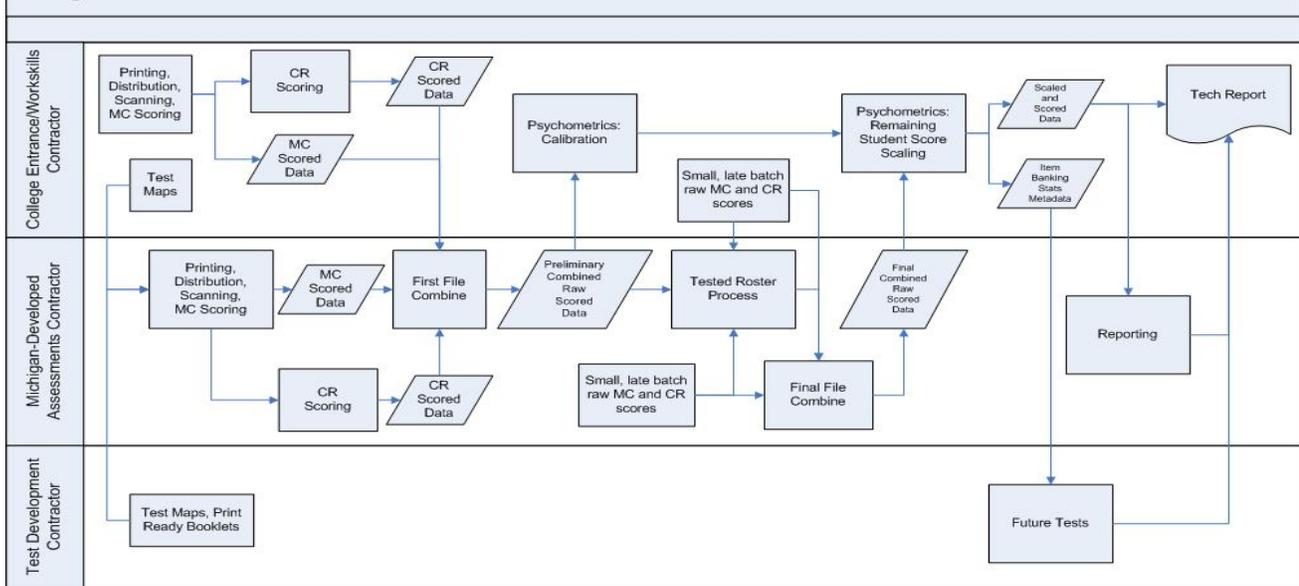
The Contractor for the Michigan-Developed Assessments will administer the Michigan-Developed field-test items with the operational assessment. The MME Administration Contractor will also score the multiple-choice field-test items at the same time as the operational items. If needed, this MME Administration Contractor may score short-answer and constructed-response field-test items after scoring the operational items and completing other time-urgent tasks, when resources become available to perform the scoring, but the relevant item statistics and performance data must be available to the Contractor for College-Entrance and Work-Skills Tests in time to allow psychometric analyses on the field test items that will produce sufficiently reliable and valid item information to the Development Contractor such that the item may be included in the next year's assessments. The Contractor for the Michigan-Developed Assessments will provide field-test statistics as part of MME file of scored results, which will be used by the MME Development Contractor to provide item cards for the Bias/Sensitivity Committee (BSC)/Content Advisory Committee (CAC) reviews of the field-test items. The field tested items will then be edited and updated in the Contractor's item banking software system by the MME Development Contractor.

The MME Development Contractor and the MME Administration Contractor for the Michigan-Developed Assessments will need to carefully coordinate their work to ensure success on the timeline that exists.

Item Bank Coordination Responsibilities The MME Development Contractor is responsible for providing an item banking software system to be accessed directly by the Development Contractor and by OEAA. The Contractor for the Michigan-Developed Assessments will have no responsibility for maintaining or accessing this software system. The Contractor will be expected to have a suitable system to track item characteristics and performance through field-testing and operational assessments for all Michigan-Developed Assessment components of the MME.



## Michigan Merit Examination Contractor Cross Functions

Version 1.3  
02/14/2008**1.104.C General Administration Tasks**

The following is an analysis of the major tasks involved in developing the end products of this Contract, relating to the Contractor for the Michigan-Developed Assessments. The MME Administration Contractor is not, however, constrained from supplementing this listing with additional steps, subtasks or elements deemed necessary to permit the development of alternative approaches or the application of proprietary analytical techniques. The Contractor for the Michigan-Developed Assessments must address these primary tasks as well as all supporting tasks. The main supporting tasks, with the assumption that quality processes exist throughout, include:

- Create a schedule for assessment administration, scheduling all tasks, subtasks, and activities to be conducted in coordination with the OEAA staff and other MME Contractors;
- Determine, in cooperation with OEAA staff, the alignment of new tests to Michigan's content standards according to pre-established timelines with sufficient time to target the content covered by the Michigan-Developed components;
- Field-test new items within operational versions of the Michigan-Developed Assessments, as needed;
- Layout, proofing, and printing of all assessment documents;
- Scan answer documents;
- Score student responses;
- Merge separate student records (using barcodes as the matching variable) for each MME component into a single student record for tested roster; transferring updated records to the MME Administration Contractor for College-Entrance and Work Skills Tests to score, scoring and technical analyses;
- Serve as the MME Contract lead for standard setting, as needed;
- Provide an integrated, standards-based system of reports for all MME assessment components, (focused on overall MME scores, but also including College-Entrance and Work-Skills Test scores on the reports);
- Serve as the MME Contract lead for range-finding and other committees as specified in this Contract;
- Receive College-Entrance or Work-Skills items for standard-setting;
- Provide documentation and electronic data management;
- Provide coordination for all aspects of integrated, standards-based reporting (.pdf, hard copy, and electronic file) of all MME components for a variety of audiences; and
- Collaborate with the MME Administration Contractor for College-Entrance and Work-Skills Tests to provide relevant portions of the technical reports for the MME.



**NOTE:** The Contractor for the Michigan-Developed Assessments will be responsible for coordinating the schedules, the layout, and shipment timing of assessment materials for these components. The MME Development Contractor is responsible for cooperation with both of the MME Administration Contractors so that the coordination goes as smoothly as possible.

Assessment administration procedures, rules, direction and guidelines must be developed cooperatively by the OEAA and all MME Contractors with the MME Administration Contractor for College-Entrance and Work-Skills Tests taking the lead. These will also address scoring, reporting, accommodations and other required assessment administration procedures. Although these may differ for the College-Entrance, Work-Skills, and Michigan-Developed components, a coordinated approach to management is expected from all MME Contractors.

Major technical and procedural issues inherent in the development of items and administration of the MME must also be addressed with final policy decisions made by the OEAA, MDE, and Michigan's State Board of Education.

#### **1.104.D MME Administration Tasks**

This section addresses the 2008-2009, 2009-2010, and 2010-2011 school years. The Contractor for the Michigan-Developed Assessments will carry out a variety of tasks for the administration of the MME. Approximate dates for each task are provided for the Spring 2009 Cycle.

In any testing component, such as the college-entrance test is new or substantially altered, additional steps will need to be taken as part of the MME administration process. For example, if a new college-entrance test is chosen, a formal statistical alignment study would be required to determine possible differences between the new test and the current MME college-entrance test. Also, if the content of the MME is substantially altered, a standard setting involving Michigan-developed assessment components (currently ELA, mathematics and science) would need to occur. The extent to which the following schedule can be carried out without additional steps is dependent on any substantial changes in the content of MME testing components, which would require additional approval from the U.S. Department of Education.

During each academic year, the Contractor for the Michigan-Developed Assessments will be responsible for the administration of the Michigan-Developed components of MME as an initial administration for all 11<sup>th</sup> grade students on MME and a retest for all qualifying 12th grade students. The Contractor will also serve as the Contractor for combining student results from all components into a single record for Tested Roster, statistical analyses, and reporting MME results for all components in an integrated, standards-based format for a variety of audiences. The administration and scoring of the College-Entrance and Work-Skills components of the MME is the responsibility of a separate Contract, which will also handle the coordinated standards-based reporting of all MME assessment components.

The MME testing conducted each school year will be administered in the spring. A current testing schedule for spring 2009, 2010, and 2011 is included as Appendix B.

1. Participate in Project Kick-Off Meeting (Within two (2) weeks of Contract start date then in July for future cycles): Key staff from the Accommodation Contractor, the MME Administration Contractors, OEAA, and sub-contractors (if used) will meet for three (3) days to review project plans, schedules, and activities. The goal is to revise schedules and planned activities accordingly, and to get to work to produce the materials needed for the Spring 2009 MME administration.

This project kick-off meeting will also serve to review assessment development plans and schedules, in order to assure that the MME item development schedule meshes appropriately with both MME Administration Contractors. The OEAA will identify appropriate staff to document the initial meeting and update the electronic project schedule as needed.

If there are new or different components to be included in the MME, a plan and schedule for conducting statistical alignment studies, etc. will need to be included. This would include announcements to schools about any new testing components of the MME assessment system and how schools would be selected to participate in the statistical alignment studies.



2. Finalize Assessment Administration Plans (Within three (3) weeks of Contract start date then in July for future cycles): The Contractor must provide a plan to develop the materials needed to administer, score (Michigan-developed assessments only) and combine reporting of all Spring 2009 MME assessment components at the appropriate dates. The plan will include, at a minimum, a detailed electronic project schedule, along with appropriate psychometric designs, to assure that the assessments will produce accurate and sound information about all students and schools.
3. Provide updated, coordinated assessment designs to OEAA and the MME item Development Contractor for review (Within four (4) weeks of contract start date then in July for future cycles): The Contractor for the Michigan-Developed Assessments, working in conjunction with OEAA staff and the MME Development Contractor, will prepare updated comprehensive assessment designs for the MME (Spring 2009 cycle). These assessment designs will serve to guide the assessment development and administration work in this and subsequent school years.
4. MME Development Contractor for the Michigan-Developed Assessments Provides Final Format Specifications for the Test Forms to OEAA and the MME Administration Contractor (Within four (4) weeks of Contract start date then in July for future cycles): The MME Development Contractor will use OEAA Blueprints (See Appendix C) to design the formats of the test forms for Michigan-Developed Testing components, including the page layout, font, the numbering of the items, and field-test item placement. OEAA staff will review and approve these plans. The MME item Development Contractor shall use these specifications to layout the field-test items in the format needed.
5. MME Development Contractor Selects Field-test Items to be Embedded in the MME Operational Assessments – Michigan-Developed Assessments (August, 2008): The MME Development Contractor will select the field-test items for the MME operational forms for the Spring 2009 cycle (within the Michigan-Developed components) in accordance with the matrix design for all content areas. In Michigan-Developed Assessment booklets, the field test items will be embedded within their content area. The position of field test items may change from assessment cycle to assessment cycle, but must remain constant within an assessment cycle. For Spring 2009, all content areas will be contained in one test booklet. There will be a total of 10 spiraled forms containing matrixed-operational and embedded-field test items. In addition, there is one (1) form to be used as the accommodated version; one (1) form for make-up testing; and one (1) emergency form (in case of a security breach). Emergency forms may be reused from one (1) assessment cycle to another so long as they remain secure, but one (1) emergency form must be available for each assessment cycle. See Appendix A for MME general assessment designs.
6. Develop Training Plan and Materials for MME Administration with the MME Administration Contractor for College-Entrance and Work-Skills tests as the lead (September 2008): The MME Administration Contractors will work with OEAA staff to develop coordinated plans and related materials for training high school assessment coordinators, assessment administrators, and proctors for the Spring 2009 cycle.
7. Desktop Publish Test Booklet Forms, Administration Manuals and Other Non-Scannable Materials; and Design Templates for Scannable Documents (September 2008): The MME Development Contractor will use the final format specifications to desktop publish the non-scannable assessment materials for the Spring 2009 MME cycle. All content areas will be combined into one (1) test booklet. The design and layout template for the scannable answer document will also be delivered. All documents will be developed with a phased approach, with MME Administration Manuals (containing non-secure material) used for late fall training receiving a first priority.

The MME administration manuals provide planning information and directions to the District and School Assessment Coordinators for managing all MME components in the Spring 2009 cycle. Only non-secure MME information is included. Currently, there is a separate manual for students testing with accommodations. Since these manuals provide MME Coordinator directions for all components of the Spring 2009 cycle, the content and layout should be coordinated with both MME Administration Contractors. Samples of current manuals are provided on the MME website, <http://www.michigan.gov/mme>.



The Accommodation Contractor will provide the print-optimized camera ready MME assessment administrator manuals for all MME assessments, as well as the assessment administrator manual for student testing with accommodations. The Accommodation Contractor will work closely and cooperatively with the MDE and the Administration Contractor to establish appropriate timelines and prepare camera-ready copies in sufficient time to meet printing and shipping deadlines. The Accommodation Contractor will prepare the MME Administration Manual for Students Testing with Accommodations will be identical to that for preparing the MME Administration Manual. This manual will use much of the same information as the original manual, but will also require the addition of information specific to administering the MME to students who need accommodations. The MME Michigan-Developed Administration Contractor will be responsible for printing and distribution of these manuals as part of this Contract.

8. MME Development Contractor Delivers Press-Optimized Files of all Non-Scannable Assessment Material Packaged by Form to OEAA and the MME Administration Contractor for Michigan-Developed Assessments (September-October 2008): The MME Development Contractor will package the proofed and OEAA-approved final copy of non-scannable assessment materials in press-optimized formats for the Contractor for Michigan-Developed Assessments. A phased approach will be used for delivery, with MME Administration Manuals (containing non-secure material) used for late fall training receiving a first priority. All materials are needed by November 2008 for the Spring 2009 MME cycle.

The development and duplication of the Braille, enlarged print, reader scripts, audio accommodations, and video accommodations will be done by the Accommodations Contractor. The Accommodations Contractor will deliver these materials to the Contractor for distribution to schools.

9. Coordinated Review of Draft MME Test Booklets for Michigan-Developed Assessments (October-November, 2008): The OEAA staff assigned to each content area of the Michigan-Developed Assessments for the MME will review the operational test forms put together by the MME Development Contractor for the Michigan-Developed Assessments and suggest any changes to the items selected or how they are packaged. The Contractor can be involved in the review.
10. Develop Answer Documents and Pre-ID Barcode Labels for Spring 2009 Cycle (September-November 2008): The Contractor will use the design and layout templates from the MME Development Contractor to develop a scannable answer document to collect the multiple-choice and the constructed-response answers (if needed) from students for all content areas. Answer documents must provide space for responding to the written-response questions, and all pages must be linked physically and/or by identifiers. The Contractor for the Michigan-Developed Assessments will utilize design templates from the MME Development Contractor to develop one (1) answer document which contains all content areas assessed as Michigan-Developed components—mathematics, science, and social studies—for day three (3) testing. These answer documents are in addition to the answer documents used in the College Entrance and Work-Skills Tests—for day one (1) and two (2) testing. The answer document must provide space for a pre-ID label to be affixed at the time of testing. This pre-collect name of student (handwriting sample), birth date (written by student), 4-digit form number, 10-digit booklet number, four 2-digit research code fields, 1-digit report codes, four 4-digit numerical bubble fields (math, ELA, social studies, and science) as an optional classroom/instructional group reporting field, and space for a pre-ID barcode label, which is to be affixed by the local school at the time of testing.

The pre-ID label contains the name of the student, their state Unique Identification Code (UIC), the district name, school name and number (from school code master), birth date, district student number, and other information as part of the barcode. This space must be of sufficient size to accommodate a barcode label that can be generated at local schools for students who are new enrollees at the time of MME administration. These barcodes must be captured as part of the scanning process and carried as identifiable, mandatory field on all Michigan-related scan, score and research files. See Section 1.104.N (11) for the Barcode Labeling Website for student pre-identification specifications. These materials are needed by December 2008 for the Spring 2009 MME cycle.

11. Develop Other Scannable Documents (Header Sheets, Teacher ID sheets, Security Sheets): In addition, the Contractor for the Michigan-Developed components will be responsible for providing header sheets for schools (if required), which includes School and Grade Identification. A scannable Teacher Identification Sheet with 4-digit numerical bubble fields also needs to be developed to link with optional classroom/instructional group codes on student answer documents. These documents will be used to facilitate the return of the assessment results to the appropriate schools and educators.



12. Develop Report Formats and Supporting Materials (November 2008): The MME Administration Contractors, working with OEAA staff, should design easy-to-read and informative reports of individual student, classroom, school, and district results from the MME to supplement the traditional reports of results that students and schools receive from the College-Entrance and Work-Skills Testing components. The MME reports are currently standards-based, and integrate the results of all MME components (College-Entrance and Work-Skills Tests, as well as the Michigan-Developed Assessments). The design of the reports, and the information presented, must comply with state and federal legislation.  
The Contractor for the Michigan-Developed Assessments will be the Contractor responsible for these combined MME reports and will collaborate with OEAA staff and other MME Contractors to propose the report formats and types of interpretive materials that must be developed to accompany the reports of MME results for a variety of audiences. At a minimum, these should include materials for students, their parents or guardians, classroom teachers, guidance counselors, school administrators, the school board, and the public. Samples of current MME reports are included as Appendix K. These formats are needed by November 2008 for the Spring 2009 MME cycle.
13. Printing the Operational Assessment Booklets for the Michigan-Developed components of the MME (November-December 2008): The operational Michigan-Developed Assessment booklets will consist of the forms specified above in number eight (8). Each section of the assessment is timed. It is anticipated that these printed materials are needed by January 10, 2009 for the Spring 2009 MME cycle. Upon receipt of the press optimized files from the Development contractor, the Contractor will consult with OEAA staff to receive print quantities for all 13 forms and will print the test booklets. The test booklets will be printed in black ink on white 50# offset paper and the color on the covers will be unique to each version of the assessment booklets. Each section of the booklets will be sealed with an inner seal, and an outer seal will seal the entire booklet.
14. Develop and Produce Needed Materials for Accommodating Students With Disabilities and English language learners (ELLs) (November-January 2009): The Contractor will cooperate with the Accommodation Contractor to produce and distribute accommodated materials according to pre-established timelines.
15. OEAA hosts Pre-ID File for Local District Update (December 2008-January 2009): The OEAA will host the Pre-ID file as described in Section 1.104.I.
16. The State Delivers Pre-ID File to the Contractor for printing Student Labels with Barcodes (January 2009): The Contractor must provide the printing of student labels with barcodes that can be affixed to MME scannable answer documents at local schools and testing sites. Labels will contain the student Unique Identification Code (state student no.) and Barcode, along with school name, number (from School Code Master) and other student demographics in a pre-identified format.
17. MME Test Coordinator supervisor training (October-November 2008): If on-site training is a requirement, conduct one (1) day test administration workshops in 12 counties around the state (Wayne, Oakland, Macomb, Ingham, Kalamazoo, Kent, Alpena, Clare, Traverse City, Cheboygan-Otsego-Presque Isle, Marquette, and Escanaba ISDs/RESAs).
18. Develop Packaging Lists (January 2009): In coordination with OEAA staff, the Contractor will be responsible for utilizing electronic submissions of enrollment numbers that will be provided by MME coordinators on the OEAA secure site. These electronic submissions are designed to improve accuracy with numbers and quantities of materials to be sent to MME Coordinators at each school district or testing site as specified in Section 1.104.J
19. Conduct Final Range-finding on Operational Constructed-Response Selected for the Michigan-Developed Assessments (January 2009): The Contractor will conduct final range-finding on any MME constructed response items selected for the operational Michigan-Developed Assessments as described in Section 1.104.G. This round of range-finding will utilize approximately 125 responses from the prior year's field testing for each item representing the full range of responses, selected by the Contractor for Michigan-Developed Assessments. The goal of this range-finding is to finalize the scoring rubrics. This information will then be used to train scorers.
20. Use Pre-ID File(s) to Print Barcode Labels for Student Answer Documents (February, 2009): The Contractor will use the state-produced Pre-ID file to pre-print barcodes for student answer folders as described in Section 1.104.I.



21. Package MME Assessment Materials (February, 2009): The Administration Contractor for the Michigan-Developed Assessments will package all assessment and ancillary materials as specified in Section 1.104.J for delivery to schools and districts using state-produced contact names and “ship to” addresses.
22. Participate in MME Assessment Administration Briefings (February, 2009): OEAA staff and staff of both MME Administration Contractors will jointly conduct assessment administration briefings for the State. OEAA staff will conduct a statewide live teleconference assessment briefing from Wayne RESA during this month (which will also be streamed via the Internet and re-broadcast), and respond to requests for regional training sessions as well. Contractors are encouraged to propose innovative ways of assuring that the individuals who will administer or proctor the administration of MME assessment components will be prepared to do so. The purpose of these briefings will be to review the procedures that the MME Coordinators need to carry out before, during, and after assessment, including their briefings on similar duties for School MME Coordinators and Assessment Administrators. Both MME Administration Contractors will explain how materials are shipped to districts, how to order extra materials, how to get answers to assessment administration questions, and how to return the assessment materials after assessment for scoring.
23. Verify Accuracy of the Scanning, Scoring, and Reporting Systems Using a Test Deck (by February 1, 2009): The Contractor will be responsible for demonstrating the accuracy of the scanning and scoring systems as detailed in Section 1.104.Q. Once all MME assessment components are scored, the Administration Contractor for the Michigan-Developed Assessments will provide a pre-formatted score file to the MME Administration, Scoring and Reporting Contractor for the College Entrance and Work Skills Tests as input for combined reporting of all MME assessment components. The latter MME Administration Contractor will be responsible for demonstrating the accuracy of the reporting system as detailed in Section 1.104.L.
24. Distribute MME Assessment Materials to Schools (March, 2009): The Contractor will monitor and facilitate the distribution of MME assessment materials to the schools or district MME Coordinators as specified in Section 1.104.J.
25. Facilitate the Creation of Bar-Coded Labels by Individual Schools for Students Registered Between the Printing of Materials and the End of the Assessment Window (March, 2009): The State provides a secure website (see Sections 1.104.I) for schools to use in creating bar-coded student identification labels for students without assessment materials printed specifically for them. The Call Center for the Contractor (see Section 1.104.N) must be equipped to assist MME Coordinators and schools in the labeling process. In addition, for districts with high student mobility (i.e. Detroit, Grand Rapids and others) there must be an opportunity to load pre-identified students as an addendum file by February 20, 2009 for March testing. These students, in the addendum file, must be matched against those students already entered to ensure no duplicates are pre-printed. Labels will be produced by the Contractor from this addendum file and shipped overnight to districts and schools within 48 hours of the receipt of the file.
26. Assessment (March, 2009): Michigan schools will administer the assessments during this time period, see schedule - Appendix B. The scheduled dates for MME are provided for the next four (4) years. Within this window, schools will administer the MME college entrance test in its entirety, on the first day of testing to all eleventh graders and any twelfth graders who are eligible for a retest. This single day of administration will be the same for all schools in that assessment window; the work skills tests are to be administered on the second day of testing; and all Michigan-Developed Assessments on the third day, embedding pilot test items in all components (mathematics, ELA, social studies and science). This is the current scheduling plan for the Spring 2009 MME cycle. See Appendix B for current and proposed schedules.
27. Return of Assessment Materials to Contractor (March 2009): The Contractor will facilitate and monitor the return of Michigan-Developed Assessments to their stated location for scanning and scoring these materials, providing clearly-designed labels and instructions for shipment as specified in Section 1.104.J.
28. Determine Quantity of Make-up Testing Materials Needed (March 2009): Each high school coordinator will utilize the OEAA-hosted website to identify the quantity of retest materials needed for the Contractor.
29. Make-up Testing of High School Students (March 2009): Currently, make-up testing is scheduled exactly two (2) weeks after the initial assessment period, a make-up test session will be scheduled, again with the College-Entrance test on day one (1), Work-Skills on day two (2), and the Michigan-Developed components on day three (3).



30. Return of Make-up Testing Materials to Contractor (April 2007): The Contractor will facilitate and monitor the return of make-up assessment materials to the Contractor scoring site as specified in Section 1.104.J.
31. Log-In of Assessment Materials (March 2009): The Contractor will log in the returned assessment materials at their scoring sites as specified in Section 1.104.L. The Contractor will follow up with schools to assure timely return of those testing materials and also collaborate with MDE and the MME College Entrance and Work Skills Administrator to ensure schools return the College Entrance or Work Skills Testing materials.
32. Locate Any Missing Materials (April 2009): The Contractor is responsible for locating all materials returned from schools and districts. This also includes being able to identify which materials have not been returned and working with the schools to ensure their return. Before this task is complete, all pertinent materials (i.e. test booklets, answer documents, recordings) will need to be returned and verified no later than one (1) week following the end of the assessment window.
33. Scanning of Answer Documents (April, 2009): The Contractor will scan answer documents as specified in Section 1.104.J.
34. Hand-Scoring of Operational Constructed-Response Items (April, 2007): The Contractor is responsible for conducting the hand-scoring of any constructed-response items for the Michigan-Developed Assessments. Currently it is anticipated that the MME Michigan-Developed Components will not contain any constructed response items. This situation may change during the term of this Contract.
35. Hosting of Tested Roster Files (April 2009 ): After scanning, the Contractor will send demographic files (in a prescribed format) that include scanned barcode information for each test taken to the Contractor for Michigan-Developed Assessments, which will serve as the lead Contractor for merging demographic information and MME components taken into one (1) student record in preparation for Tested Roster, which will be hosted on the OEAA secure web site, which is accessible to authorized Michigan educators as specified in Section 1.104.M. The purpose of this hosting is to make certain that demographics are coded correctly, that students are assigned to the correct school and district, and that answer documents for all students who were tested with a MME component have been received and scanned by the appropriate MME Administration Contractor.
36. Update of Tested Roster File Hosted (April 2009): As specified in Section 1.104.M, the State will host the tested roster file for all MME assessment components. Resolution of missing tests, multiple tests for one (1) student, or requested changes indicated by local school districts, such as changing the school of record for testing, which will be determined in conjunction with MME Administration Contractors, with the use of test images of student answer folders as a research tool. The resulting updated tested roster files will be provided to the appropriate MME Administration Contractor, which will merge the updated demographics and other information for preparing finalized score files, with integrated demographic updates and edited files of scored student results.
37. Construct Final MME Student and School Report Files (April 2009): The Administration Contractor for the Michigan-Developed Assessments will integrate the score files from all MME assessment components to produce combined final reports, a guide to interpreting the reports, and research files, as specified in Section 1.104.K.
38. Reports of Student Results Processed and Printed (May 2009): The MME Administration, Scoring and Reporting Contractor for College Entrance and Work Skills/Vocational Guidance tests will process the results from each school district and the scored file of the Michigan-Developed Assessments provided by the Contractor for the Michigan-Developed Assessments. The scale scores and performance levels will be transferred from the College-Entrance/Work-Skills Contractor to the Michigan-Developed Contractor to produce electronic and printed copies of each report listed earlier, as well as a guide to those reports, and a research file that combines the results of all MME assessment components.
39. Statewide MME Results Reported (May 2009): The State will host the statewide reports as .pdfs on the OEAA secure website. The .pdfs will be provided to the State by the Contractor for Michigan-Developed Assessments. After private preview by local school districts, statewide results will be publicly released as specified in Section 1.104.K.
40. Student Reports Shipped to School Districts (May 2009): The Contractor will ship the reports and guides to reports to each school's MME Coordinator as specified in Section 1.104.K.



41. Hand-scoring of Field Tested Constructed-Response Items (May-June, 2009): To be conducted by the Contractor for the Michigan-Developed Assessments as specified in Sections 1.104.F and 1.104.G. This data must be provided in a timely manner to the College-Entrance/Work-Skills Contractor for psychometric analysis to be performed in time to allow for these items to undergo statistical review by the MME Development Contractor such that these items may be considered for use on the next cycle of the MME. Currently it is anticipated that the MME Michigan-Developed Components will not contain any constructed response items. This situation may change during the term of this Contract.
42. Statewide Debriefing of MME Results (May-June 2009): Through the use of multiple workshops (or optional state teleconference) with appropriate materials, the Contractor will illustrate to schools how to improve students' achievement on the MME assessments.
43. Conduct Initial Range-finding on Field Test Items (June 2009): The Contractor for the Michigan-Developed Assessments will conduct initial range-finding on the Spring 2009 embedded field-test items included in the Michigan-Developed Assessments in accordance with the responsibilities laid out in Section 1.104.G. This round of range-finding is to verify that all points are represented and the rubric is viable. Items may be discarded (or preferably sent back to the Development Contractor for editing) at this point if they are simply not working. Some ELA tasks (if used) and Social Studies have pre-established rubrics that are called for as part of the test design based on curriculum standards. Mathematics and Science have rubrics specific to the content tested that may vary depending on the item. The Contractor will select approximately 25 sample responses for each item.
44. Provide Updated Field-Test Items with Statistics and Committee Comments to the MME Item Development Contractor (August, 2009): The Contractor will prepare an electronic document linking field test items with the item codes provided by the Development Contractor and linking them to field test statistics and committee review comments.
45. Technical and Other Summary Reports Produced (August 2009): The MME Administration Contractor for College-Entrance and Work-Skills Tests will serve as the lead Contractor in preparing a series of reports and analyses immediately following the public release of the statewide results for each assessment and testing cycle. The Contractor for Michigan-Developed Portions must collaborate on, and contribute to, relevant parts of the technical report. These analyses include the following:
  - Technical Report of the MME assessment system (see Section 1.104.S for an outline of the Technical report);
  - Summary of MME Results for Each Demographic Subgroup;
  - Summary of District Results by Intermediate School District or Regional Educational Service Area;
  - Item analytic data for operational items (DIF performance; upper-lower 27% analyses, and so forth);
  - Strand- and benchmark-related analyses (KR-20s and other analyses for each set of items measuring a given strand and/or benchmark);
  - Subject matter analyses (e.g., Mathematics) including KR-20s and other analyses for each entire set of items used to measure the content area;
  - Item analytic data for the field test items that can be used to select the items to replace the released items the following year; and
  - Industry standard analyses of horizontal linkages (to prior years' score scales) and vertical linkages.

These analyses should be performed at the immediate conclusion of the statewide reporting (or in the case of field-tested constructed response items, as soon as the scores are available), so that the results can be used to communicate about the assessments used, as well as to plan for improvements in the assessments for subsequent MME assessment cycles.

#### **1.104.E Potential Future High School Reform Initiatives – Deleted N/A**

#### **1.104.F General Committee Meeting Responsibilities**

The Contractor will have separate responsibility for hand-scoring, range-finding, standard-setting, and other committee meetings specific to Michigan-Developed Assessments. The OEAA staff will have overall responsibility for all Technical Advisory Committee meetings (note that the Contractor for may be required to attend and/or provide presentations for many of the TAC meetings. In these circumstances, this Contractor is responsible for its employee expenses, except for meals and snacks provided during those meetings by OEAA).



Except for the TAC meetings, responsibilities for the Contractor include:

- Making all arrangements for meetings, including developing an agenda, securing the meeting location, and paying for meeting expenses with approval of meeting arrangements by OEAA;
- Recruiting potential participants in coordination with OEAA, and with OEAA approval of potential participants;
- Inviting potential participants, and verifying their intent to attend;
- Arranging suitable lodging for participants traveling more than 50 miles one (1) way;
- Paying travel expenses for participants at state rates. All travel reimbursements shall be paid at the state rate in effect on the date of travel. The state rates can be found at [http://michigan.gov/dmb/0,1607,7-150-9141\\_13132---,00.html](http://michigan.gov/dmb/0,1607,7-150-9141_13132---,00.html);
- Keeping records of participant attendance;
- Providing either reimbursement of district substitute teacher fees or a daily honorarium according to participant request (the daily honorarium is to be \$250 for standard-setting and range-finding participants);
- Providing (continental) breakfast, lunch, and snacks for all participants, including OEAA and other MME Administration Contractor staff;
- Providing dinner reimbursement at the state rate for those staying overnight;
- Training participants using OEAA-approved training materials;
- Preparing (in consultation with OEAA staff) all materials needed by the committee participants to perform their tasks;
- Conducting meetings according to OEAA-approved protocols;
- Providing sufficient experienced staff in coordination with OEAA to facilitate and monitor each large-group and break-out session;
- Providing for appropriate security of the OEAA assessment data and items;
- Administering security agreements for participants, and monitoring compliance with those agreements; and
- Recording the proceedings of the meetings with sufficient detail to provide appropriate and timely follow-up of records with OEAA staff.

The Contractor will be responsible for all travel and lodging costs of their staff and OEAA staff related to their Contract activities where OEAA staff needs to be present. Approval by OEAA for each meeting and participant is required before scheduling each meeting.

#### **1.104.G Responsibilities for Specific Committee Meetings**

The MME Administration Contractor for Michigan-Developed Assessments will have responsibility for any standard setting, hand-scoring and range-finding meetings related to the Michigan-developed assessment components of MME. For Spring 2009 and beyond, it is anticipated that the MME Michigan-Developed Components will not contain any constructed response items. This situation may change during the term of this Contract. This does not affect standard setting; therefore, the following range-finding and hand-scoring meetings will only occur when constructed-response items are included in the Michigan-Developed Components.

These responsibilities include:

##### **1.104.G.1 Range-finding Meetings**

In coordination with OEAA staff, the Contractor will conduct range-finding sessions to prepare the scoring rubrics for constructed-response items on Michigan-developed assessments. The MME Administration Contractor is responsible for all arrangements and costs associated with range-finding, including responsibilities listed in Section 1.104.H.

The Contractor for Michigan-Developed Assessments must plan on an initial range-finding for embedded-field test items immediately following the spring assessment window.

Separate range-finding committees will be convened for each Michigan-Developed Assessment. Each range-finding committee will be comprised of OEAA staff, the Contractor staff and eight (8) to 10 Michigan teachers at the educational level of the students to be assessed (i.e., high school). The range-finding committees will meet for not longer than three (3) days.



The Contractor will recruit and train active Michigan teachers from the content area and level tested to establish, via range-finding, the scoring rubrics for constructed-response items on the Michigan-Developed Assessments.

In preparation for range-finding, the Contractor will work with OEAA staff to identify a selection of schools/districts in order to ensure that papers selected for range-finding represent the full range of student achievement as well as provide exemplar reader-training papers. The Contractor will make copies of all range-finding papers needed by the range-finding committee members to prepare scoring rubrics for the assessment items. The Contractor will ensure that assessment items, student responses and scoring rubrics remain secure during and after the range-finding session.

Range-finding committee members should be trained using anchor papers from previous assessments or previous field tests in coordination with the MME Administration Contractor.

As the final step in range-finding for the Michigan-Developed Assessments, the range-finding committees for each content area (mathematics, social studies, and science) will reread all papers that have been grouped by the same score point to ensure consistency in applying the scoring guide.

#### **1.104.G.2 Hand-scoring Meetings**

The main tasks of the hand-scoring process are ensuring accurate student response scoring, by tracking and monitoring intra-rater and inter-rater reliability, and providing timely processing for return of student results for the Michigan-developed assessments.

The Contractor will provide a mechanism for scoring the constructed-responses of students from the Michigan-Developed Assessments. Appendix A indicates the number of students to be assessed, and the number of constructed-response items to be used per content area. Virtually all of the Michigan-Developed constructed-response items are scored using a four (4) or six (6) point holistic rubric. Range-finding (detailed above) is part of the process of analyzing the field test results, so such rubrics, with training and validation sets, will be available at the time of actual implementation of these items in MME assessments. Hence, scoring of constructed-response items can proceed as soon as the answer documents have been scanned and imaged.

While the use of image-based scoring, either in large performance scoring centers or via the Internet in a distributed scoring mode, is attractive to OEAA (for reasons of monitoring the reliability of the scoring process), cost considerations are also important.

The Contractor will assure that all scorers do not have proxy to any student information regarding each answer document besides the written response to the item(s). OEAA requires the use of college graduates for scoring.

The Contractor will implement and maintain a quality assurance process for hand-scoring activities. Quality scoring is vital to the success of OEAA operations.

For the Michigan-Developed Assessments, there will be:

- Two (2) independently randomly selected readers for each constructed response, where each reader is blind to the selection of the other reader.
- Third readings for responses where the two (2) readers score the response more than one (1) category apart.
- Re-scoring of all responses scored by a reader identified as poor-performing, and elimination of that reader's scores from the data.

The Contractor shall establish and detail methods and thresholds for identifying poor-performing readers to be used in all hand-scoring operations, and will finalize those methods and thresholds in coordination with OEAA.

The Contractor will provide OEAA with reader production and reliability statistics on a daily basis, including reader-training results. The following information is to be e-mailed daily:



- Inter-rater reliability (describe calculation);
- Estimates of rater harshness;
- Percent of papers requiring a third reading;
- Daily individual reader reports for the first week and weekly reader reports starting the second week;
- Validity reports on reader scoring; and
- Score distribution across score points

If OEAA finds a questionable scorer reliability indication, OEAA has the right to have the affected papers re-scored.

The Contractor has responsibility to perform the following tasks:

- Recruit retired or current Michigan teachers or school administrators as readers. This effort must be documented. If scoring with retired or current Michigan teachers or school administrators jeopardizes the time line specified for scoring, an exemption from this requirement may be made, and the exemption must be approved by the OEAA CCI. In all cases, however, the scorers must be college graduates.
- Establish a procedure to screen scorers to ensure employment of reliable item scorers. The expected number of readers per grade is given in the table below:

Projected Number of Readers Required Per Year by Content Area<sup>1</sup>

Administration	Math	Science	Social Studies
Spring MME	64	85	78

<sup>1</sup>These calculations assume 10 scoring days for each MME administration.

- Hire, pay, train, retrain, and dismiss scorers (i.e., item readers) as necessary.
- Ensure that all items are double-read by two (2) different staff members and identify procedures for blind second readings. Third readings are required for non-adjacent scores.
- Prepare scoring packets that are randomized or staggered so that papers from the same school and district are not scored together.
- Establish mutually-agreed upon paper flow procedures.
- Use predetermined reader comments when scoring the Michigan-developed assessments to provide additionally enhanced feedback to students and teachers. Similar Reader Comments will be developed and used with the written pieces for the Michigan-developed assessments that will be administered beginning in year one (1).

Other Range-Finding Tasks

- Ensure all range-finding and hand-scoring activities are provided in an accurate manner.
- Implement and maintain a quality assurance process for range-finding and hand-scoring activities.
- Locate and establish sites within the State of Michigan for range-finding and item scoring.  
**Note:** if the Contractor uses an electronic rating system for scoring, then physical location in Michigan is not necessary.
- Provide the appropriate hardware and software as necessary for range-finding and hand-scoring (or e-scoring) operations.
- Score word-processed answer documents that are used as an appropriate accommodation for students.
- Take immediate action following a scoring alert. The alert criteria and steps followed will be provided to the MME Administration Contractor.
- Take immediate action following score inquiries and challenges. The score inquiry and challenge criteria will be provided after Contract start date.
- Notify, by letter, the superintendent of the school district when readers encounter a possible child-in-danger paper. A photocopy of the student’s response would be included with the letter.
- Work with OEAA staff to provide a balanced set of student papers to use as released papers for public dissemination. Annotations must be written for these papers with a broader, public audience in mind.
- Provide the OEAA with reader production and reliability statistics on a daily basis, including reader training results. The following information is to be faxed daily:



- Inter-rater reliability (describe calculation);
  - Percent of papers requiring a third reading;
  - Daily individual reader reports for the first week and weekly reader reports starting the second week;
  - Validity reports on reader scoring;
  - Score distribution across score points; and
  - If the OEAA finds questionable scorer reliability indication, the OEAA has the right to have the affected papers re-scored.
- Provide scoring data to the OEAA as requested relevant to range-finding and constructed response item scoring.
  - Provide accurate results on student responses to constructed response assessment items in a timely manner.

#### Preparation of Field-Test Item Statistics for the Michigan Development Contractor

The Contractor will score all field test items and provide data analyses that are necessary for BSC and CAC meetings to the MME Development Contractor.

The Contractor will provide industry-standard item-pilot statistics for the bias and content review. The Contractor will also provide additional interpretive information in graphics (based on mutual agreement of the MME Administration Contractors and OEAA) for flagged items. The graphics should relate the number of correct responses to the proportion of respondents answering the item correctly, with graphical comparisons of groups for DIF flagged items. With the approval of OEAA, the Contractor may provide alternative interpretive information to the review committees.

#### **1.104.G.3 Standard Setting Meetings**

It is likely that during the course of this Contract that standards (cut scores) will need to be reset. When this is deemed necessary, OEAA will notify the Contractor of this request.

The Contractor will have the responsibility for all standard-setting tasks. This includes meetings specific to all MME components, including the Michigan-Developed Assessment(s) that the Contractor is responsible for as well as any items from the College-Entrance or Work-Skills tests that may be required for a content area, such as science. All OEAA approval for the following activities must come from the OEAA Technical staff in consultation with the TAC:

#### Preparation for Standard Setting

The Contractor will, as the student results are produced and returned to school districts, prepare the materials needed for setting standards on the MME assessments in the specified content area. OEAA prefers the use of a Student-Based Standard-Setting method to set standards such as the Body of Work method (see Chapter 8 of Cizek, 2001, *Setting Performance Standards: Concepts, Methods, and Perspectives*, Mahwah, NJ: Lawrence Erlbaum Associates). An item-mapping procedure may be utilized if OEAA determines that the Body of Work method is not feasible. It is assumed that separate panels will be convened to set standards on each of the assessments.

The Contractor will need to plan for a separate panel of standard-setters to work in each content area. If MME operational items from the College-Entrance or Work-Skills Tests contribute to the score for a content area, they must be included as part of the standard-setting process.

Currently, it is anticipated that standards will need to be set for science and social studies when the new Course Content Expectations for high school have been approved. For science, the first MME cycle reflecting the new HSCes is spring 2009; for social studies, it is spring 2010. This will result in convening a science standard setting panel in spring 2009 and a social studies standard setting panel in spring 2010. Each panel should be comprised of at least 20 members.

Depending on final federal approval, additional standard setting may not be required for ELA and mathematics components during the timeframe of this Contract.



The standard setting process is to be scripted, so that the panelists receive identical information regardless of which content area panel they are serving on. The script must be approved by OEAA staff and supported by the OEAA Technical Advisory Committee (TAC). It will be followed as written during the sessions. All materials needed for standard setting must also be reviewed and approved by OEAA in advance of the sessions. The Contractor will provide all materials for conducting the standard setting process.

Because of the tight timelines, the Contractor will need to prepare the report of standard setting almost instantaneously. Hence, the Contractor should be prepared to conduct analyses of interim standard-setting results on-site, and to prepare the final report of standard setting prior to leaving Lansing at the end of standard setting. Thus, OEAA staff and Contractor staff will conduct a post-standard setting meeting to debrief from the meeting(s) and to prepare the materials needed to describe the processes used, to transmit the recommended standards, and to seek rapid approval of the standards by the State Board of Education.

The Contractor will consult with OEAA staff for approval of the statistical analyses that will be performed in the standard setting process to both set the standards and to provide impact data to the standard setting panelists, OEAA staff, the TAC, and the State Board of Education.

#### Standard Setting Conducted

The Contractor will conduct the standard-setting meeting(s). The meeting should be held at a site where the multiple panels can meet in a separate room, and—if more than one panel is needed—is located in rooms near one another, with storage that is secure, and work room(s) nearby. Each content area panel (such as science or mathematics) must be held in a separate room, so that the discussion of one (1) group cannot be heard by any other group.

The Contractor shall provide a leader for each standard setting content area (e.g., Mathematics). This person should prepare for the meeting by being well-acquainted with the script, materials, statistics, and procedures to be used.

The day before standard setting is to take place, OEAA staff and the staff of the Contractor should plan a full-day meeting to practice the standard-setting process and to make any last minute changes needed. This preview should include the use of the statistical processes to be used at each stage to show panelists what decisions they have made at that stage in the process and their impact.

#### Summary and Review of Standard Setting

The Contractor will summarize the results of the standard setting for each panel prior to leaving Lansing (at the end of standard setting). This will consist of a technical report on standard setting, with chapters on the processes and statistics used in setting standards, a chapter on the results of the process in each content area, and the recommended standards across the grade levels within each content area. This Technical Report should, to the greatest extent possible, be pre-written; OEAA staff will also “pre-write” the State Board of Education item so that only the results of the panels will need to be added to the item.

#### State Board of Education Approves New Standards

OEAA staff will present the results of standard setting to the next meeting of the State Board of Education. A representative of the Contractor must be on hand to answer questions regarding the process or the results. The State Board will be asked to approve the standards set by the panelists, or to revise these standards as it sees fit. Should revision be necessary, the Contractor will produce all report revisions.

#### **1.104.G.4 Technical Advisory Committee Meetings**

The OEAA has sole responsibility for conducting and paying for TAC meetings regardless of the agenda for the TAC meetings. Note that representatives of both MME Administration Contractors and the MME Development Contractor will be required to attend those portions of the TAC meetings related to MME Administration topics, such as review of psychometric procedures, report formats, or technical reports. MME Administration and Development Contractors will be expected to coordinate their needs for time on the agenda with the OEAA staff, and will be expected to pay all of their own employees' (or subcontractor(s)) expenses except for meals and snacks provided by the OEAA during the meetings.

TAC meeting responsibilities for the Contractor include, but are not limited to, the following:



- Working with OEAA staff and other MME Contractors, as needed, to schedule presentations for the TAC.
- Developing materials for requested presentations to the TAC with submission of draft documents to the OEAA staff according to pre-established timelines.
- Preparing (in consultation with OEAA staff) all materials needed by the committee participants to perform their tasks (except for tasks on the agenda at the request of the Development Contractor).
- Conducting presentations according to OEAA-approved protocols for TAC meetings.
- Providing for appropriate security of the MME assessment data and items.
- Recording TAC comments regarding presentations in sufficient detail to provide suitable follow-up with OEAA staff.

#### **1.104.H Production of Student Identification Documents**

Administration Contractors for all OEAA assessments must coordinate the layout of student identification documents so that they appear to come from the same office. The OEAA staff will take the lead in the development of pre-ID files for use by MME Administration Contractors in designing and developing coordinated student identification documents.

#### **1.104.I Production of Student Barcode Labels**

MME Student Barcode Labels will be used to identify all answer documents. A file of these Student Barcode Labels will be provided by OEAA for students who are pre-identified prior to a determined cut-off date and will be printed as labels by the Contractor for delivery to Michigan high schools for attachment. Since it is not possible for schools to include students (as part of the pre-ID file) who transfer or enroll between the pre-ID cut-off date and the assessment cycle, OEAA barcode labels for students who are pre-identified after the cut-off date will be printed at the schools on blank labels that will have been provided by the Contractor.

In designing the answer document for each assessment, the Contractor will create space that is sufficient to accommodate the Student Barcode Label Pre-ID section on the first page to allow for student information, including the OEAA Barcode to be collected and returned as part of all MME demographic and scoring files. (See Appendix I: Sample Answer Document Cover)

Only answer documents with these bar-coded labels will be used to produce test reports for College-Entrance, Work-Skills or Michigan-Developed components of the MME reports.

Develop Bar-coded Labels: The Contractor will develop both the process of creating, and the format for printing, student identification labels to adhere to assessment materials. The information that is necessary on the printed bar code labels is as follows: Unique Identification Code (State-issued UIC), student name (last, first and middle initial), district code, school building code, school building name, date of birth, gender, ethnic code, district student number and 10-digit barcode number (printed as a Code 39 barcode and as a legible number under the barcode.) The checksum for the barcode shall be based on the Mod 10 method.

#### **1.104.J Processing of Assessment Materials**

##### Sampling Plan

The MME Michigan-Developed assessment booklets will have several forms. Each form will contain a different set of field-test items that need to be tried-out with a demographically representative sample of students. Most districts will be assigned one (1) form for their entire district. The larger districts will be assigned a different form for each school building within the district. The exception to the form assignment is that a specific form is used by all students that qualify under the Individuals with Disabilities Act section 504 and have an Individual Evaluation Plan that requires most of the assessment to be read to them, as well as those requiring English language learner accommodations. Therefore, all schools will have one (1) form assigned to them plus possibly some accommodation forms for students with disabilities and ELL.

The Contractor will develop a Sampling Plan to be used to determine which form number to assign to each participating school. The Sampling Plan shall be demographically balanced and provide a sufficient number of students taking each form so that results of each field-test item are sufficient to provide psychometrically reliable and defensible information.

Currently, 10 districts are considered large enough to assign a different form per school. They are Dearborn City School District, Detroit Public Schools, Grand Rapids Public Schools, Warren Consolidated, Kalamazoo Public Schools, Utica Community Schools, Troy School District, Pontiac City School District, Lansing Public School District, and Farmington Public School District. The districts included in this list may change from year-to-year as populations shift. The sampling plan is required for estimating print quantities. MDE must approve the Sampling Plan before printing begins.



### Print Quantities

By using the approved Sampling Plan, the Contractor and the Accommodations Contractor shall prepare and provide MDE with a listing of quantities they are using to create/duplicate for each assessment material before they begin creating/duplicating those materials. MDE shall review the listing and provide comments within 48 hours. The Contractor shall not begin creating/duplicating any materials until they receive approval of the quantities in writing from MDE. The Accommodations Contractor will be responsible for providing the Contractor with the Braille, enlarged print, reader scripts, audio accommodation and video accommodation materials. The Contractor will be responsible for tracking and distributing these materials to/from schools/districts.

Develop Packaging Lists: The Contractor will use the updated Pre-ID file particularly the number of students enrolled in each school and the assessments designated for each student to build a packaging list of the materials (including standard and nonstandard accommodations) to be sent to each school and to each district. OEAA will provide a file of the Assessment Coordinators for the MME and their mailing address and shipping address. The State will also provide summary figures of the numbers of students enrolled in each school at each grade within each district. OEAA will provide these two (2) files to the Contractor by three (3) months prior to the assessment window.

The Contractor will send a letter to the MME Assessment Coordinators (addressed both to the position and the person, using the address in the above mentioned file), requesting (1) address to which the assessment materials are to be sent, which may not be the same as the address to which letters or memoranda are sent via U.S. Mail, and (2) the e-mail addresses and phone numbers of the Assessment Coordinators and the School District Superintendents.

A list of the materials to be shipped is provided in Appendix A for the MME. The figures from the second file mentioned above, are the figures that the Contractor should use to build packaging lists for materials shipment. Each school is to receive a five percent (5%) overage over the figures that OEAA provides. In addition, each Assessment Coordinator is also to receive a five percent (5%) overage of the materials, in order to meet short-shipment requests from school buildings. Materials will be packaged and sorted in school order, and sent to the district or school as indicated by the Assessment Coordinator.

Package Assessment Materials for MME District or School Coordinators: If there is a request to ship materials to a district, the materials for each building should be packaged separately within boxes which are delivered to the district. Ship to the District Assessment Coordinator (including specified name) at the designated shipping address, which may be different than the district mailing address. The MME District Coordinator is responsible to deliver MME materials to schools two (2) weeks prior to testing. If MME assessment materials are shipped directly to schools, the package should list the name of the MME Coordinator for the building and be shipped to the building address listed for the school in the School Code Master file.

Ship Assessment Materials: The materials shall be sent by means that will track whether the materials have been received, and if so, by whom. This means that the U.S. Postal Service may not be used. Private trucking companies or shippers, such as UPS or Federal Express (Air or Ground), may be used, so long as they can track when, where, and by whom each shipment was received. Bidders are asked to specify carriers and method of shipment (Air or Ground).

Distribute Assessment Materials to Schools: The Assessment Coordinator should distribute the assessment materials to each school two (2) weeks prior to assessment. Before doing so, the Contractor will ask each Assessment Coordinator to inventory the materials sent, making sure that there are adequate numbers of assessment booklets, answer sheets, Assessment Administration Manuals, and other assessment materials, so that any shortages can be filled by the Contractor prior to the start of assessment in the district. Assessment Coordinators will be asked to call the Contractor's toll-free number (see Section 1.104.N concerning the Call Center) to obtain the needed materials. Assessment Coordinators will also call the appropriate toll-free number if they have any questions about the assessment administration process. These calls should be answered by the Contractor's Call Center staff, or if they cannot answer the questions, referred to OEAA staff for a response.

Return of Assessment Materials from Schools to the MME Administration Contractors: The Contractor will provide a pre-paid means for each school district to return their assessment materials for scoring, separately for the initial and retest MME administrations. This will, at a minimum, include: sturdy boxes for the safe return of assessment booklets and answer sheets, shipping labels to attach to each box (differentiating between assessment booklets and assessment answer sheets) that indicate the Contractor's shipping address, as well as the district or school name and code number, and the shipper's tracking number. The Contractor will also provide a means for the district to indicate to the Contractor the quantities of each type of assessment materials that are being shipped.



The Contractor will have a system to indicate that the shipments have been entered into the shipper’s system that is capable of being updated as materials are received (noting discrepant shipments) and logged in.

Processing Assessment Materials Returned by Schools: The Contractor will have a system in place so that all materials received will be logged in within 24 hours of receipt, and will be prepared for scanning within 72-hours of receipt. The status of each district should be readily discernable, ideally from a web-based application that the OEAA (and the Contractor’s Call Center) can readily access, and that each Assessment Coordinator can consult (for their district only). This will permit OEAA staff to track district shipments (thus permitting OEAA and Contractor staff to contact schools whose materials are not received by the end of this period), as well as verifying that materials have been received from each school district. The database underlying this web-based application should be updated at least daily, so that staff can quickly ascertain the status of each district’s shipment of answer sheets.

Scanning Student Answer Documents and Identifying Materials: All student responses on answer documents (machine-scorable assessment booklets or the machine-scannable answer sheets) will be imaged for record-keeping purposes, as well as to facilitate the hand-scoring of student responses to constructed-response items. Therefore, all student identification documents must also be imaged as specified in Section 1.104.G.

Image Storage and Retrieval: Because OEAA desires to eliminate the need for paper storage, the Contractor is required to provide storage of images of all answer documents (scannable answer sheets and test booklets) in 240 dots per inch (DPI) resolution in 256 shades of gray (eight (8) bits per pixel).

**1.104.K Production and Dissemination of Reports and Guides to Reports**

The Contractor will take the lead in the development of coordinated standards-based reports incorporating all MME components (College-Entrance, Work-Skills, and Michigan-Developed Assessments).

The Contractor will produce nine (9) different types of reports of student assessment results to be distributed to students, classrooms, schools, districts, ISDs, and/or colleges. The Contractor will package reports as follows:

Report:	Recipient:						
	Student	College	Classroom	School	District	ISD	State
College-Entrance Test Results	<b>Quantities</b>						
<b>Individual Student Report</b>	1	4	1	1	0	0	0
<b>Classroom Roster</b>	1	0	1	1	0	0	0
<b>Classroom Item Analysis</b>	1	0	1	1	0	0	0
<b>School Item Analysis</b>	0	0	0	1	1	1	0
<b>School Summary</b>	0	0	0	1	1	1	1
<b>District Item Analysis</b>	0	0	0	0	2	1	0
<b>District Summary</b>	0	0	0	0	2	1	1
<b>ISD Summary</b>	0	0	0	0	0	3	1
<b>High School Feedback and Retention</b>	0	0	0	1	1	1	1
	<b>Quantities</b>						
MME Results (All Components)							
<b>Individual Student Report</b>	1	0	1	1	0	0	0
<b>Parent Pamphlet</b>	0	0	0	1	0	0	0
<b>Classroom Roster</b>	1	0	1	1	0	0	0
<b>Classroom Item Analysis</b>	1	0	1	1	0	0	0
<b>School Item Analysis</b>	0	0	0	1	1	1	0
<b>School Summary</b>	0	0	0	1	1	1	1
<b>District Item Analysis</b>	0	0	0	0	2	1	0
<b>District Summary</b>	0	0	0	0	2	1	1
<b>ISD Summary</b>	0	0	0	0	0	3	1



The following reporting tasks are applicable to all assessments and cycles:

Construct Final Student, School, and District Report Files: The Contractor will use integrated files of the post-assessment-window tested roster files and the edited files of student results from the multiple-choice and constructed-response portions of all assessment components from the MME Administration Contractor for College-Entrance and Work-Skills Tests into an overall final student report file for each district.

Post Reports on OEAA Secure Website as They Become Available: The Contractor will use the final student results file to develop the reports listed above. The OEAA secure website will be used to allow district to check student demographics and other testing information using the Tested Roster process. Updated information from this process will be used for scoring, technical analyses, and the standards-based reporting of MME results.

College-Entrance Test Result: Deleted N/A.

High School Feedback and Retention Reports: Using the National Student Clearinghouse information, the MME Administration Contractor for College-Entrance and Work Skills Tests shall provide university-by-university high school data showing which students end up in remedial courses and showing the percentage of returning sophomores. Other similar reports will be considered. The Contractor may need to collaborate with the Administration Contractor for College-Entrance and Work Skills Tests to imbed the High School Feedback and Retention report within the school report and include a summarized form of the report in the district, ISD, and state summary reports.

All Other Reports: With the exception of the traditional report of College-Entrance Test Results, all other reports may combine results from the College-Entrance and Work-Skills Testing components and the Michigan-Developed components as long as each component is clearly identified to illustrate performance on each and in combination. Please note that the design and layout of the reports may change throughout the term of this Contract, but will be comprised of data available within the systems available to the Contractor.

Guide to Standards-based Reports: In addition to .pdf and hard-copy reports, a guide to reports will also be produced by the Accommodations Contractor for distribution electronically to the public at large. The Contractor will be responsible for duplication and distribution of the hardcopy for each school, district, and ISD. See [http://www.michigan.gov/mde/0,1607,7-140-22709\\_31168\\_31175---,00.html](http://www.michigan.gov/mde/0,1607,7-140-22709_31168_31175---,00.html) for sample reports and guide to reports.

#### **1.104.L Software, Database, and Website Development and Maintenance**

This section describes the information technology system development requirements for this Contract. Michigan has a separate state agency (the Michigan Department of Information Technology - DIT) that is responsible for all state-paid information technology activities, including those of MME. Thus, DIT staff will assist MDE staff in monitoring the IT development activities as well as IT implementation activities throughout the life of this Contract.

Project progress will be closely monitored during the initial development period and the engagement will be terminated if, in the judgment of the CCI, the Contractor is not performing adequately.

#### **General IT Development Requirements for All System Modules**

Complete requirements definition, design, development, testing, training, and implementation deliverables for each system module as defined in the IT Quality Plan (Appendix C). All sign-offs required in the IT Quality Plan must be obtained for each module.

Contractor must facilitate requirement gathering sessions for all IT systems work. If facilitation of requirement gathering sessions is not conducted by the Contractor, they must subcontract with a proven IT Vendor to perform the requirement gathering sessions at no additional cost to MDE.

Assure that all project and program quality standards are observed through planning, review and inspection as defined in the IT Quality Plan in Appendix C. State technical and project management standards are referenced in section 2.050 State Standards. The Contractor should note that a Standard Exception Request has been approved for the use of Microsoft.NET as the development tool for this Contract and Microsoft IIS will be used as the web server. Any proposed changes in the quality plan or standards must be approved at project startup.



All Web sites designed under this Contract by the Contractor must have the general look and feel of the official State of Michigan Web sites, including adherence to the IT standards (Section 2.050). All Web sites must include online help documentation. All system modules must include the ability for a system administrator to update database reference code tables.

**Browser Requirements:**

For private internet sites which require secured login, software must work with a Web browser that supports HTML 4.0 and later (Example: Internet Explorer 3.02 [and greater] / Netscape Navigator 3.0 [and greater])

For public accessible internet sites refer to State of Michigan standards at:

[http://www.michigan.gov/documents/Look\\_and\\_Feel\\_Standards\\_2003v2\\_72379\\_7.0.pdf](http://www.michigan.gov/documents/Look_and_Feel_Standards_2003v2_72379_7.0.pdf) and  
[http://www.michigan.gov/documents/Usability\\_guidelines\\_2003v1\\_72381\\_7.pdf](http://www.michigan.gov/documents/Usability_guidelines_2003v1_72381_7.pdf)

**Platform Requirements:**

The Contractor must follow requirements in section 1.103 Technical Environment. The web pages must be operational in both a Windows and Mac environment.

**Security Requirements:**

The Contractor must follow the specification in the security section (Section 1.104.P Security Requirements).

**Required System Modules**

The following system modules are to be developed and implemented as detailed in this section.

- 1) Develop Imaging/Scanning System
- 2) Develop Scoring System
- 3) Deleted N/A
- 4) Develop Reporting System (both electronic and hard copy)

One important multi-module requirement is that the modules must allow for data from a single student (including barcode information) to be tracked from the receipt of materials through processing, scanning, scoring, and reporting.

**MDE existing system modules that will require interfaces with Contractor's systems:**

The following system modules are in place at MDE and will require the Contractor to develop interfaces that will allow sharing of information and data as efficiently as possible (direct reading and updating of MDE database's is strongly encouraged):

- 5) Materials Return Status and Shipment Tracking
- 6) Coordinator Data Collection
- 7) Teacher, Student, and Manual Counts and Additional Material Order Collection
- 8) Security Administration System
- 9) Pre-ID hosting Web site
- 10) Demographic file hosting Web site
- 11) Student barcode labeling Web site
- 12) Electronic report hosting Web site

**1) Develop Imaging/Scanning System**

Verification that the imaging/scanning system is operational must be done by October 1, 2008.

The Contractor will develop the system to scan all answer documents (including answer folders and all student identification documents, including pre-printed answer folders, and bar-coded adhesive labels) for assigned MME components. This scanning/imaging process is performed both for record-keeping purposes and to facilitate the hand-scoring of constructed response items.

The Contractor can propose to use whatever scanning solution they wish to use, mindful that only five (5) weeks has been allotted to scanning, scoring, demographic cleanup, and reporting.



The system developed by the Contractor must be capable of indexing all image documents in a manner that allows for all of a single student's images to be accessed as a unit. The demographic data from the assessment document (barcode, lithocode) is also included in the record as an identifier of the student and index information to the stored TIFF image. MDE would prefer an image of the entire document (not image clips) and would also prefer images of the documents that are not template created.

Contractor must provide a method of transferring high-definition images with an image index to MDE within two (2) weeks of scanning for hosting on MDE servers.

Technical Requirements:

- Adhere to all security requirements.
- The quality of the scan must be at least 240 dpi with a 256-level gray-scale (eight (8) bits per pixel).

## 2) **Develop Scoring System**

Verification that the scoring system is operational must be completed by October 1, 2008.

This system applies to translation of demographic information and selected-response data only, except for the combination of hand-scored responses with machine-scorable responses for purposes of creating a scaled score and determining a performance level.

The Contractor will need to demonstrate that their scanners are capable of distinguishing between actual student marks and stray marks or distortions caused by dust, dirt, misaligned answer sheets, and so forth. In addition, Michigan requires 100% verification of double marks, blank answers, and assessments where only an item or two (2) is responded to. The Contractor will use computer-based routines or human-editing stations to assure that the MDE assessment data files are 100% clean and accurate.

Documents are to be scanned on equipment that is capable of Optical Mark Reading (OMR) of pencil marks and producing a hex level read output of the darkness of the mark. The 0 value of the mark should be equivalent to paper and the F value of the mark is the highest (darkest) level. These data are required as well as the student's selected intended mark (the darkest mark) in a string, the raw score for a mark in an item and a TIFF image of the form.

The Contractor will develop the system to score answer documents for assigned MME components. The scoring system should incorporate translation of the pre-printed or bar code demographic information, and all multiple-choice answers. The system must be capable of translating images of item responses to designations of the answer option chosen (e.g. 1, 2, 3 or A, B, C). The system must also be capable of translating answer options to a score for each item (e.g. 0 /1). The system should also be capable of updating records by adding scores from the constructed-response items after they are hand-scored in an accurate, time-efficient manner.

At all phases of production related to test materials and scanning student answer documents, the Contractor must create data files from the results. All items must be scored accurately, efficiently, and reliably. All exam information must be made available both to CCI for the MDE and to the independent evaluator for analysis and evaluation. Efficient, timely, and accurate scoring of performance items within the statutory timeline will require extraordinary effort on the part of the Contractor. The high-stakes nature of MDE assessments requires that the highest standard of quality assurance be applied to all phases of scoring and analysis.

Although the Contractor may use a batch processing system, the MDE student data system can be transaction based with each student is an individual. Thus, data files of all records scanned and the corresponding document tiff images are required via a secure FTP site according to predetermined schedules for MME. Although tiff images that closely mirror the originals (including background) are preferred, MDE recognizes that a dropout process in scanning can be used. Therefore, scanned images that create the data (non-dropped out) with a template-produced background are acceptable. The Contractor must ensure that the overlaying process is not conducted in such a manner to render the image unreadable to a human during a review audit process.

The State requires that the transfer file is provided (specified in Appendix E – File Formats) that includes the hex read level (O-F) values of all bubbles read, the Contractor scanner's interpretation of the darkest mark, the raw score against the score key, the demographics (ID bar-code) and the tiff images of the document.



3) **Deleted N/A**

4) **Develop Reporting System (both paper and electronic)**

The Contractor will develop a reporting system that permits the following reports to be produced electronically (PDF format) and in paper. All electronic PDF reports will be provided to MDE with a file naming convention similar to "19-ABCD-00000-00000-00000-AL-NP.pdf". The first two (2) digits are the test cycle code; the next four (4) letters are the specific report code; the next three (3) sets of five (5) numbers are the ISD, District and school codes; then grade level; and finally non-public or public designation. MDE will then load these reports into the OEAA system to be accessed via the OEAA Secure Site where schools will be given the option of having the reports printed for them.

Electronic versions of reports will be provided for all schools, but MDE will allow the schools the option of having the reports printed for them during the pre-identification process. Along with the Pre-Identification data, MDE will provide the Contractor a listing of which schools will require reports to be printed for them.

MDE will provide design layouts for each report by October 1, 2008. The following is a general description of each report:

a) **MME Guide to Reports – How to Understand, Interpret, and Use MME Results**

The Accommodations Contractor will prepare/update (write, format, edit, and proof) the MME Guide to Reports – How to Understand, Interpret, and Use MME results. The Contractor will be responsible for providing high resolution sample reports for use in the printing and dissemination of the report guide. The Contractor will need to coordinate dates for the production of the camera-ready report guides so they can be shipped to districts with the printed reports. In addition to the printed Handbook, it is also posted on the MME Web page. The MME Guide to Reports provides sample of the various reports along with descriptions of how users can better understand and use those reports.

b) **Student Reports**

Examples of the reports that need to be produced are in Appendix K.

c) **Develop Student Score Data Files**

The student score database will allow for the production of files to be distributed both to MDE and to individual districts via a secure Web site. Individual districts should be able to access only their students' data. The two (2) different types of files include a row of data for each student in the following general formats:

- Student Data file format (with all information scanned from the answer documents, including barcode, demographics, item response strings [for selected response items]; item score strings [for all items]; raw scores for each sub-content area (e.g. strands and/or GLCEs); and total raw scores, scale scores and performance levels for each content area. All erasure data (e.g. option darkness, option selected, option erased, and option not selected) shall be included in the student data file format.
- Student Data File – file format with student level data with scale score and (mini-) performance level from the previous cycle linked to current cycles.
- Aggregate Data File – file showing counts and averages at the building, district, ISD, and State levels for multiple reporting subgroups.
- Longitudinal Aggregate Data File – file showing counts and averages at the building, district, ISD, and State levels for multiple reporting subgroups across test cycles.
- Item analysis file – file showing statistics in the aggregate for all items.

**NOTE:** all data captured on student-level or aggregate reports must also be captured in the data files.

These files must be available both for individual districts and for the State as a whole. For the State level files, the files must be available for both public and non-public students (if any non-public student is assessed). Final file specifications will be determined jointly by MDE, the lead MME Administration Contractor for reporting and the MME Administration Contractor for College-Entrance and Work-Skills Tests, with MDE having final approval rights. Updates to files must be completed on entire files, NOT with addenda to previous files. The most current version of data files must be available on the reporting Web site described below.



### **Processing Reports**

The reporting systems will be set up so that all district's results are made available at the same time following the demographic update. They will not be reported "on the fly" – that is, without waiting for any other district to be received. Each of the reports will be made available in electronic format (static or dynamic Adobe Acrobat PDF) and will be printed by the Contractor for distribution to school districts according to pre-established timelines. The student score files listed above must be downloadable from the reporting Web site.

Electronic versions of reports will be provided for all schools. The lead Administration Contractor for reporting will print and distribute reports via a means that will track whether the materials have been received, and if so, by whom. This means that the U.S. Postal Service may not be used. Private trucking companies or shippers such as UPS or Federal Express (Air or Ground) may be used, so long as they can track when, where, and by whom each shipment was received. Statewide reporting will occur when all school districts' materials are received. Statewide results will be made available electronically and in print after all district results have been prepared.

As mentioned above, the lead Administration Contractor for reporting will need to demonstrate the reporting systems no later than October 1 of each year. This demonstration will include the production (on-line viewing, printing, and downloading) of the reports for a test-deck of mock student responses, where the test deck has been submitted to the entire scanning, scoring, and reporting process. At least four (4) MDE staff will travel to the location of the lead MME Administration Contractor for reporting to evaluate the test deck procedures, with all travel expenses paid by that Administration Contractor as indicated in Section 1.401.F. MDE staff will review the mock reports with staff from the Contractor to determine any areas on which corrections are needed. This reporting system will need to be ready for production use by October 1 of each year. See Appendix L for Test Deck and Customer Acceptance Specifications.

**NOTE:** All test decks must be designed from specifications developed primarily by the lead Administration Contractor for reporting, but approved solely by MDE to include all potentially problematic scenarios found on answer documents which may cause problems for the scoring system.

The test deck shall undergo the entire Customer Acceptance Process from bubbling in the answer documents through processing, scanning, scoring, rolling into a data file, and mock reporting at the individual student, school, and district level. At least one (1) small district with at least two (2) schools having at least two (2) class groups in one (1) of the grade levels tested by the MME shall be included in the test deck for each content area.

The file for creating mock reports will be augmented with additional scenarios to minimize the amount of answer sheet bubbling for the test deck. These additional scenarios would represent potentially problematic situations that would not arise from the act of filling out answer documents, but from other issues that may cause problems for reporting (e.g. the form numbers being correctly reported with accurate raw score data, etc.).

### **Technical Requirements**

Contractor should generate all reports on the Contractor report server so that the OEAA Secure Site can access all reports based on the report naming conventions.

Current response time for report retrieval on a T1 connection is less than two (2) seconds. Retrieval times longer than five (5) seconds will not be acceptable.

The lead Administration Contractor for reporting will use the final student results file (see Develop Student Score Data Files) to develop the reports described above. This means that as each district is completed, the Coordinator will be notified that the district's results (from the student level to the district summaries) are available on the secure Web site for downloading and printing. The OEAA Secure Site will be used from the time that the first district is posted until all districts have received their results and the results have been reported publicly. At that point, the school and district results will be transferred for hosting on State report servers.



Once the “go live” time for release of state results has been reached, a file of state, district, and school results will be made available to the media and other members of the public. The shipment of printed reports should be timed to occur immediately following the electronic release of results to the public.

The systems solution should have the capability to facilitate display, via the OEAA Secure Site, of longitudinal data beginning with the first cycle of testing processed by the system (defined as linking results from the previous year to the current year for individual students, and as presenting on aggregate reports the baseline year [currently 2005, but the baseline year may change if new standards are set], the current year, and the previous three (3) years).

This lead Administration Contractor’s system must make use of the Unique Identification Code (UIC) as the longitudinal linking attribute in any systems solution presented. All data included in the research and scored files listed below must be included in the longitudinal component of the database.

The student score database solution must include the capacity to update data from an appeals/corrections window after the initial district “go-live” date. The appeals/corrections window is handled on a state-owned Web site, and is not the responsibility of the lead Administration Contractor for reporting. This Administration Contractor must be capable, however, of receiving files of corrections from MDE and updating student data.

#### **MDE Modules which require interface with Administration Contractor’s Systems:**

##### **5) Materials Return Status and Shipment Tracking**

The Contractor will provide a pre-paid means for each school district (and/or individual school buildings) to return their assessment materials for scoring. This will, at a minimum, include: sturdy boxes for the safe return of assessment booklets and answer documents, shipping labels to attach to each box) that indicate the Contractor’s shipping address, as well as the district name and code number, and the shipper’s tracking number. Contractor will have a system to indicate that the shipments have been entered into the shipper’s system (e.g. UPS, FedEx) which is capable of being updated as materials are received (noting discrepant shipments) and logged in.

The Contractor will also use a system to log in all materials received within 24 hours of receipt, and will be prepared for scanning within 72-hours of receipt. The Contractor’s system will feed on a regular basis (at least daily) material return and shipment tracking data to the OEAA Secure Site database. The status of each district will readily discernable, from the OEAA Secure Site which the Contractor’s Call Center can readily access, and that each Coordinator can consult (for their district only). This will permit MDE staff to track district shipments (thus permitting MDE and Administration Contractor staff to contact schools not received by the end of this period), as well as verifying that materials have been received from each school district. The database underlying this web-based application should be updated at least daily, so that staff can quickly ascertain the status of each district’s shipment of answer sheets.

##### **6) Coordinator Data Collection Web site**

The Contractor will access a State of Michigan system (Educational Entity Master (EEM) formerly known as School Code Master) for school, district, ISD and coordinator information. This EEM will allow Coordinators and other authorized users throughout the state access to their contact information to update at anytime throughout the year.

##### **7) Teacher, Student, and Manual Counts and Additional Material Order Collection**

The Contractor will receive from the OEAA Secure Site database the district’s estimate of the quantities of each type of all assessment materials (also known as enrollment or student counts) that are needed for each assessment cycle. The Contractor will have access to the OEAA Secure Site system which will include school and district teacher, student and manual counts.

The Contractor will identify all material to be produced for each assessment cycle and provide these data to MDE in a format to be determined for loading into the OEAA Secure Site database. School and district OEAA Secure Site users will access the Order Additional Materials section via OEAA Secure Site database. During the additional order window, the Contractor will access additional order data for production and shipping via a direct database read from the OEAA Secure Site database.



8) **Security Administration System**

MDE will maintain the IDs and passwords for users of the OEAA Secure Site. The district and school users must have only one (1) login and password for all the system updates that will be required of them throughout the assessment cycle.

9) **Pre-ID hosting Web site**

MDE will provide database views for the Contractor to use via VPN connection in order to access student demographic information in the OEAA Secure Site Database. This Web site permits entry of students for assessment purposes, allowing each student to have a barcode created which uniquely identifies the students at a building for each assessment cycle.

10) **Demographic file hosting Web site**

OEAA Secure Site allows entry of student demographics for demographic update within the OEAA Secure Site database and barcode creation purposes.

11) **Student Barcode labeling Web site**

OEAA Secure Site provides a web-based capability for student barcode label printing to be performed at the local districts and schools.

12) **Electronic report hosting Web site**

OEAA Secure Site provides a web-based capability for access of all electronic PDF reports from the OEAA Secure Site database.

**NOTE:** Any Contractor modules that interface with the MDE report hosting Web site must NOT cause bandwidth and/or capacity failures with heavy loads on the MDE report hosting Web site.

**1.104.M Item Management**

**Item Banking:** The Contractor is responsible for providing updated statistics from the operational and field-test administrations, as well as comments from the range-finding committee members, on the various items in electronic form to OEAA and to the MME Development Contractor within two (2) weeks after embedded field-test items on Michigan-Developed Assessment components are scored and analyzed after appearing on operational assessments. Should problems with analyses be identified, updated statistics should be provided to OEAA and the MME Development Contractor within two (2) weeks after the completion of re-analysis. These should be provided in electronic format such as an Excel spreadsheet or SAS data file with links to the item identification codes provided by the Development Contractor to the MME CCI.

**Item Release:** After each MME cycle, an assessment-like form must be prepared using approximately 50% of Michigan-Developed operational items administered in that cycle for distribution via hard copy and the MDE website (Adobe Acrobat pdf). The MME Development Contractor is responsible for selecting the items to be released with the assistance of OEAA.

Items that use copyrighted materials may be released in a different form than other items. The form of release will depend upon the agreement of the holder of the copyright with the Contractor concerning the publication of the copyrighted materials outside their operational use on the assessments. If the copyright agreement allows for the public release of the copyrighted material, the materials will be released with the items. Otherwise, the items will be released with a reference to the copyrighted materials that will allow teachers and other interested parties to locate the materials.

All forms to be released must be approved by OEAA prior to any public release or distribution. After approval of the forms by OEAA, the Contractor will notify the MME Development Contractor of each item to be released at least one (1) day prior to the items being released.

**1.104.N Call Center (Ongoing Throughout the Duration of this Contract)**

The Contractor is responsible for hosting a call center. The Contractor is responsible for hosting their own call centers, unless multiple MME Contractors choose to collaborate on call center responsibilities.

**NOTE:** The Contractor's Call center will also be an e-mail center with a single e-mail address to which questions may be directed.



Provide Call Center Assistance: The Contractor is to provide a toll-free number, staffed by persons knowledgeable about the MME, from 8 am to 5 pm EDT/EST on Monday through Friday excluding federal Holidays (but including summer vacation days) throughout the entire duration of this Contract. The MME Assessment Coordinators will use this number to order any extra materials, but will also use the Call Center to ask questions. Routine questions that have approved answers can be provided by the Call Center staff. New or unique situations should be forwarded to a designated OEAA staff member for response. The staffing of this Call Center can be variable, but should be adequate that individuals are not put on hold for long periods (10 minute maximum), unable to reach someone due to busy signals, or otherwise be unable to receive assistance.

Provide Call Center Support: To ensure success of the MME, it is essential that the Call Center is ready and capable to implement and support this assessment program. The Contractor's Call Center support is a single-point-of-contact solution. Contractor will handle all types of calls from shipment of materials (never received, need additional, etc.) to coordination with OEAA system administration (forgot password, can't download file, etc.). The types of calls that should be routed to other State of Michigan agencies will be identified during the first Kick-Off meeting.

The primary customer will be MME Assessment Coordinators, but will also include others. The stronger the help system, the more valuable this program will be, which will result in less frustration for both school districts and OEAA staff. Contractor is to provide a toll-free telephone number, toll-free fax number, and an e-mail address for issues to be submitted 24 hours a day through the duration of this Contract.

MME call centers should use three (3) levels of support. Level one (1) is the call center agent. Call center agents assist with the calls when possible. If they are unable to provide resolution, and it is a technical call or mailing sub-contractor call, it would be escalated to level two (2). Level two (2) is a technical support person that could assist with system administration issues (such as download problems, etc.) or the mailing sub-contractor that could assist with shipping issues. Level three (3) is OEAA staff. In the case that level three (3) support is required; the MME Administration Contractor will notify OEAA staff that Level three (3) support is required by e-mail and a follow-up phone call. The OEAA staff member will find the answer, if necessary contact the Michigan Department of Information Technology (DIT), and provide resolution to the Contractor's Call Center. This notification will be with an e-mail and followed up with a phone call. All callers should be called back with a status update within two (2) working hours of their original service request, and every 24 hours thereafter until a solution is found.

Provide call center reports: The following information is a list of data and information that must be provided on a monthly basis for the Call Center Detail Report:

- Date/Time (hours, minutes and a.m. or p.m.) service request received, problem, and name and location of requester.
- Date/Time (hours, minutes and a.m. or p.m.) service request closed and resolution.
- Name of person providing resolution.
- Service report control number.

The following information may also be required for the monthly Call Center report:

- Volume of calls by day and hour
- Average time on hold by day and hour
- Number of dropped calls by day and hour.

Additional information may also be required for the monthly Call Center report upon request of the CCI for OEAA based upon experience with the performance of the Call Center and/or unanticipated types or volumes of support calls.

#### **1.104.O Schedules, Update and Planning Meetings, and Record-Keeping**

The Contractor must provide a comprehensive, highly detailed schedule for project deliverables and activities for all MME components, lead contractor responsibilities and cycles. This should be made available in paper form and electronically (using MS Project software or other comparable planning software; MS Project is preferable) to OEAA upon the start date of this Contract and after each modification of the schedule throughout the course of this Contract. This comprehensive schedule should include all detailed assessment administration, scoring, and reporting activities, since the administration procedures and schedule will determine when materials needed in the assessment programs must be prepared and when hand-offs involving other MME Contractors are required.



In order to monitor project activities, OEAA will require bi-weekly written progress reports, plus weekly update telephone meetings and monthly face-to-face meetings with Contractor's staff. Additionally, the Contractor will report to the CCI of OEAA and at times will meet with other groups regarding this project. The Contractor must address all the subtasks and activities as specified in Section 1.101 and as outlined below:

Narrative Timeline: Contractor must include a detailed narrative timeline or schedule that outlines by assessment cycle, school year, task/subtask, and overall chronological order for this entire Contract period, each activity to be performed under this Contract. The chronological schedule must include proposed task initiation and completion dates and levels of effort (i.e. hours) by task for proposed personnel including all subcontractors. The schedule should show which organization is responsible for each task. The schedule will also serve as a monitoring document to assure timely completion of tasks as scheduled.

Since the schedule may need revision and updating during the term of this Contract, Contractor must follow the change management process in Section 1.403 with the CCI for OEAA when changes are anticipated by providing an updated version in writing. Two (2) copies of any updated schedule must be submitted 30 days in advance for approval. The CCI for OEAA shall respond in writing to each updated schedule within 10 working days of receipt. Timeline revision may require a Contract amendment.

Progress Reports: The Contractor will produce bi-weekly progress reports with relevant tasks and activities from the schedule included and progress noted for each. The reports will also indicate unanticipated outcomes or problems. Contractor will e-mail the written report to the CCI for OEAA by noon EST/EDT of the first Tuesday of each month, covering the previous month's activities.

Management Meetings - The successful operation of the project will require weekly telephone conference call meetings between the Contractor and OEAA staff, or as requested by the CCI for OEAA. These conference calls will provide an opportunity to review and discuss task implementation and status. Monthly in-person meetings will also alternate between Contractor's office and the OEAA location. Subcontractors will meet jointly with the Contractor and OEAA staff as appropriate to the tasks to be discussed. The Contractor and any subcontractors will be responsible for the cost of sending its staff to meetings and other project-related meetings in Lansing, MI. Contractor should also budget for three (3) OEAA staff to attend six (6) two (2) day monthly meetings at the Contractor's site. The Contractor should also budget for six (6) Lansing, MI based two (2) day project meetings per year.

In addition, quarterly executive management meetings shall be conducted between OEAA and the Contractor with, at a minimum, the following two (2) people from each organization: (1) the highest level staff with normal and significant involvement in the MME management and with an executive level officer of each organization who can discuss policy issues. The focus of these meetings shall not be day-to-day issues in this Contract, but on evaluation of the current status of the client/Contractor relationship and on problem solving to improve the current status of the relationship. These meetings should be conducted just before or after an already-scheduled monthly management meeting.

Other Meetings: Contractor may be required to make periodic reports to the State Board of Education (oral and written) and meet with the CCI for OEAA and advisory committees, or other groups as required by the CCI for OEAA. For the purposes of this project, Contractor must plan and budget for at least six (6) additional two (2) day meetings per year, each attended by two (2) persons from the Contractor.

Records and Minutes: The CCI for OEAA will determine appropriate staff to take meeting minutes. All minutes must be electronically maintained and submitted to the CCI for OEAA within 48 hours.

#### **1.104.P Security Requirements**

Ensuring security is of paramount importance in establishing and maintaining the highest possible standards of technical quality, perceived fairness, integrity, and public confidence of the high-stakes OEAA assessments. It is the responsibility of the Contractor to have a system that ensures that documentation and all assessment items, assessment materials, electronic files, and data are developed, used, and maintained in a secure manner, protecting the confidentiality of all materials, records, and files. It is required that the Contractor obtains a third-party certification annually regarding the level of security practiced by the Contractor and based on the COBIT framework which may include the following:

- IS Risk Assessment
- Digital Signatures
- Intrusion Detection
- Viruses and other Malicious Logic



- Control Risk Self-assessment
- Firewalls
- Irregularities and Illegal Acts
- Security Assessment (penetration testing and vulnerability analysis)

All data and document handling under this Contract is highly sensitive. All electronic transfer of data needs to be encrypted with a minimum of 128 bit encryption including Contractor to state, state to Contractor, and Contractor to Contractor as required by this Contract.

The Contractor must assure that only the appropriate personnel with direct responsibilities for item development and review, assessment development and construction, and assessment administration have access to assessment materials.

These security procedures shall be employed for:

- transfer of items to and from the Development Contractor;
- item review;
- item field tests;
- assessment review and public access;
- assessment administration, including the delivery and collection of materials to, at, and from school sites;
- document processing, handling, and storage, recovery; and
- all other circumstances in which security of assessments and assessment materials is required.

#### **State's Security Guidelines**

All Contractor personnel must comply with the state's security guidelines published on [http://www.michigan.gov/dit/0,1607,7-139-30639\\_30655---,00.html](http://www.michigan.gov/dit/0,1607,7-139-30639_30655---,00.html). For example, 1310.02 Information Processing Security; 1460.00 Acceptable Use Agreements; etc.

MME Contractor's staff assigned to the project will also be expected to:

- sign non-disclosure agreements
- sign acceptable use and security agreements
- submit to background checks

#### **Acceptable Use Policy and Security Agreement**

All Contractor personnel will also be expected to comply with the State's acceptable use policies for State IT equipment and resources. Furthermore, Contractor personnel will be expected to sign an annual State of Michigan Contractor Security Agreement 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.

#### **Background Checks**

The Contractor will be required to authorize the investigation of its personnel proposed to 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. Such investigations may include Michigan State Police Background checks (ICHAT) as well as 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.

#### **Secure Transfer of Data**

The Contractor will utilize a minimum of 128-bit encryption to handle electronic transfers of data to and from the State and our subcontracting partners. Encryption will be primarily implemented by the use of Secure Socket Layers (SSL), but other methodologies such as file level encryption and Virtual Private Networks (VPN) will be utilized if mutually agreed upon. Contractor will provide the capability to authenticate to a common LDAP solution by utilizing Active Directory Application Mode (ADAM) or other means as appropriate. Contractor will monitor and implement the necessary security procedures to ensure all interfaces utilize the proper security to meet the State's technical environment described in section 1.103.

**Secure Materials**

The number of booklets sent to a school or Local Education Agency (LEA) is recorded and based on previous use, as well as, numbers of students registered for an assessment through the state's pre-identification process. All answer documents are numbered, using best practices for electronic tracking of assessment materials. Security measures must be documented for all aspects of item development, item reviews, and assessment administrations. This documentation must be provided to the OEAA as part of the monthly progress reports and summarized in the Technical Report, Section 1.104.S.

**Assessment Monitoring**

Contractor staff from the Grand Rapids and Ypsilanti offices will monitor a sample of Michigan schools randomly selected by MDE and Contractor staff. Using data forms approved by the MDE, the Contractor monitors will observe pretest activities, actual test administration, and post-test activities in cooperation with the test administrators at these schools. The Contractor will write a report summarizing this monitoring effort and include it in the Technical Report. The Contractor will also use the information gathered to improve Administrator Handbook procedures.

**Security Breaches**

The Contractor has an established a plan and procedures for the investigation of any security breach including: deliberate attempts, electronic access to information, and accidental breaches. The Contractor will review this plan with MDE staff, modify it as necessary, and develop a final, approved plan. Once approved, the plan will guide Contractor actions in all subsequent MDE test administrations. The Contractor's project manager will review the plan from time to time with MDE staff to keep it up to date and incorporate lessons learned from year to year. The timely reaction to a known or suspected violation is critical to controlling the damage that may result from the violation. Contractor personnel are required to report any known or suspected violation of security procedures, or attempts by someone to solicit confidential or restricted information, to the project manager. It is then the project manager's responsibility to conduct an investigation to determine if a violation has occurred, to assess the impact, and to report findings and recommendations to Contractor executive personnel and the MDE. A summary of the administrative guidelines for conducting such investigations are listed below.

- Obtain a complete and accurate statement of WHO, WHAT, WHEN, and WHERE from the individual reporting the incident. Determine if there were any other individuals involved in the incident, and obtain a statement from each person.
- Review all statements to determine if there is enough evidence to support further investigation of the incident. If further investigation is warranted, Contractor will determine the specific security procedure violated, the individual responsible, and if secure material was actually compromised. It is important to determine if the incident involves just a procedural violation, or a procedural violation resulting in a compromise of information.
- If the incident involves just a procedural violation without the compromise of secure information, then the investigation can be completed. Recommendations for administrative actions or changes to procedures will be submitted in writing and by email to the MDE CCI within five (5) working days of identifying the security breach.
- If the incident does involve a compromise of secure information, the investigation will continue so as to determine the amount of damage that may have been caused. At this point, the investigation may become a collaborative effort with other project team members to determine the amount of damage, and what needs to be done to reduce the impact on the project. Within five (5) days of determining a violation has occurred, an investigation report will be submitted in writing and by email to the MDE CCI that will include the investigation findings and recommendations for administrative actions or changes in procedures.

After a security breach investigation is complete, there will be a complete review of the security plan by the project manager to determine if changes or additions to the procedures are required. Copies of all correspondence resulting from the investigation will be maintained in the project files.

**Erasure Analyses**

Using the Contractor's process of Digital Mark Recognition (DMR), bubbled marks are read and each mark is assigned a value on a 16-point scale. The scale represents the darkness/completeness of the mark and, consequently, the system's degree of confidence that the student intended the mark.



As answer documents are imaged, they are also subjected to error analysis. This includes manual confirmation of bubbled marks that the DMR system considers suspect. The unresolved item or error is flagged, and the image is made available immediately for manual correction of the data. On-screen data correction delivers a significant productivity advantage in that it virtually eliminates the need to refer to the original paper form for resolution. Should paper forms be required for conflict resolution, the system's ability to record page specific identifiers makes document retrieval quick and efficient. Once the input is resolved, the edited data is output to a file. That data file is input into Contractor's scoring tools, where student responses are scored against the key. Contractor will work with the MDE to develop the specifications for all of the analyses that MDE will want using this data. Some of these could include students within content area(s) who erased a correct answer and chose instead an incorrect answer or students who erased an incorrect answer and chose the correct answer.

The final population of erasures would represent students who erased their first guess and whose second guess was wrong as well. Other areas of investigation might be distribution of erasures across content areas, perhaps giving some indication of perceived test difficulty or confusion; and erasures across field test items as compared to operational items. In addition, this data can be used to determine whether or not there are indications of improper answer corrections within a specific population. Where there is reason to suspect an occurrence of this type, the following actions can be taken:

- Documents will be scanned for indications of wrong-to-right erasures and the state averages and standard deviation will be computed for each subject at each grade level
- Populations/students whose wrong-to-right erasures exceed the state average by more than four (4) standard deviations will be identified
- For each population/student with excessive erasures, the proportion of wrong-to-right erasures to the total number of erasures will be considered
- For those populations where the wrong-to-right erasure trend indicates potential improper action, a report will be generated for the MDE's review

#### **1.104.Q Quality Control and Assurance**

The Contractor must ensure that all assessment materials are accurately, efficiently, and reliably developed, produced, and scored. The Contractor must provide the facilities, personnel, equipment, processes, procedures, and safeguards necessary to ensure that all materials including answer documents, assessment booklets, administration materials, and ancillary materials are handled securely. At the request of the CCI, the Contractor must demonstrate and provide evidence that the quality control procedures are being followed.

1. Description of the initial process: Interface with the OEAA staff in identifying the appropriate students to be tested. As an effort to increase accuracy, data is collected four (4) to six (6) weeks prior to assessment for printing barcode labels which are affixed to answer documents at local school testing sites.
2. Quality scoring: The Contractor will ensure that all MDE assessment materials are accurately, efficiently, and reliably developed, produced, scored, and formatted for high standard print and presentation quality. Contractor will provide the facilities, personnel, equipment, processes, procedures, and safeguards necessary to ensure that all materials including answer documents, assessment booklets, administration materials, and ancillary materials are handled securely. Contractor will provide quality assurance during all phases of material development and assessment administration, but especially during the handling and processing of students' answer documents. At the request of the MDE CCI, Contractor will demonstrate and provide evidence that the quality control procedures described in this section are being followed.

Contractor's stringent development and production procedures to ensure the quality of publications are as follows:

- Mock-ups are proofread by editorial and content specialist staff.
- MDE approval of materials prior to printing.
- Experienced manual writers will develop the MDE Examiner Manuals and the Test Administration and Coordination Manual.
- Manuals and all ancillary materials will be subjected to the same rigorous controls as the test booklets and answer documents.



The Contractor shall implement, maintain, and constantly update, at a minimum, the following quality assurance controls:

- Score key verification
- Post analysis of item keys
- Response analyses to determine score frequency distribution by item
- Verification of bank values of item statistics
- Live data checks to verify that data/results conform to approved specifications
- Comprehensive software test plan
- Test security via an application called Security Barcode Check-In Application (SBCA)
- Unique lithocodes per answer document
- Internal answer document tracking using an application called ObjectTracker
- Routine scanner calibration
- Pre-testing and monitoring of machine-scanning applications
- Verification of machine-scanned output
- Guidelines for handling physical answer document repairs and extra pages
- Double data correction process to verify student response and demographic information
- Review and proofread all electronic and printed report deliverables

The Contractor will use a successive check quality assurance and control system to ensure and maintain accurate and timely scoring results, reporting, and dissemination of data. Upon a deliverable request from the MDE, a QA test analyst working with our Programming Manager will develop a software test plan for review and approval. The test plan for the MME will be based on specific test deck and client service rules as determined by the MDE. Software test plans are peer reviewed and shared with development staff for review and input.

Throughout the execution of the test plan, all defects are logged, assigned, and followed through to resolution. Software changes or “fixes” provided by the developer to resolve defects are re-tested until satisfactory results are achieved. Regression testing of previously tested functionality is performed to ensure that the fix did not adversely affect any other functionality of the application/system.

Additional testing is performed on web applications using a variety of browsers that are deemed appropriate for the web application. QA performs tests to assure appropriate response times during task processing, including uploading and downloading of data, retrieval of report information, and page retrieval. Due to the sensitive nature of test data, web applications are tested for security to certify that only authorized users have access and unauthorized users are denied access.

Deployment of a software application to the staging environment is also tested during the QA process in partnership with Contractor’s Network Operations (NetOps) team. The staging environment closely matches the production environment, which enables us to determine projected behavior once the application is deployed to the production environment.

When all QA testing is completed, Contractor will produce a testing summary that includes a statement from the test analyst regarding the stability of the deliverable, any known issues, potential risks, and any outstanding test cases. Management reviews the testing summary and release notes during the sign-off process and certifies the software. Contractor will allow MDE to review of all test plans and release notes for all MME deliverables, as necessary.

The Contractor will maintain the integrity of test security and ensure that all used answer documents for all tested students are scored and reported. The Contractor will carefully monitor the quantity of test materials returned by the districts and compares them to the total quantity sent. The Contractor’s Security Barcode Check-In Application (SBCA) allows operations personnel to scan used and unused secure material to determine what is missing. A Missing Materials Report lists the secure test materials not returned. This report can be generated at any time for immediate investigation and resolution.

Another application used to ensure that all answer documents are accounted for and are being processed in a timely manner is the ObjectTracker system. Barcodes can identify scan bins associated with particular schools and districts. ObjectTracker allows the tracking of the barcodes of a scan bin (batch) and its contents (header sheets and answer documents) throughout processing.



Ensuring the accuracy of student response, data collection is an important component of producing accurate student score reports. Scanning and scoring programs are fully tested and reviewed using structured testing methodologies before, and continually monitored throughout, live test materials processing. Scanning applications that include every scannable document are written using the Virtual Scoring Center™ (VSC™) document setup application. Each application will be tested to ensure it is properly defined and setup. This testing stage is conducted to ensure that the data derived from all grids appearing on the scannable document are: included in the export file, accurately read, and return the correct value. A quality control sample of answer documents (test deck) will be created so that all possible responses are verified. This structured method of testing provides exact test parameters and a methodical way of determining that the output received from the scanner(s) is correct. The documents and the data file created from them are carefully compared to further ensure that results from the scanner are accurate according to the reporting rules provided by the MDE staff. Accurate scanner calibration is verified at the time of testing, and scanners are re-calibrated to specifications prior to each staff shift change to ensure that calibration remains constant and accurate.

The Contractor has a set of comprehensive guidelines for eliminating situations that might threaten the integrity of scanned data. By following these strict guidelines, scanner operators ensure that the most accurate information possible is read from the document. Scanner operators handle minor response document repairs that allow the original documents to go through the scanner properly. In the rare event that a page from an answer document has more serious damage, the gridded responses from the original, damaged page are transcribed onto a replacement page. A second person verifies that the page was transcribed correctly. An adhesive label is placed on the original page explaining that it was transcribed, by whom, and the lithocode value of the page on which it was transcribed. This page is kept with the rest of the document as a reference in case of a question or challenge. On occasion, schools might submit photocopied answer documents that are not read correctly by the scanner. These are transcribed just like damaged pages. Replacement pages have machine-readable lithocodes. The Contractor uses these lithocodes to document that these are replacement pages to verify that transcriptions were performed correctly.

Besides handling student document pages that do not scan, scanner operators also respond to extra pages rejected by the scanner. If an extra page contains a handwritten or typewritten response, the scanner operator fills out a label identifying the document it is associated with and attaches that label to the page. The scan bin is set aside, and a scoring assistant is notified. The scoring assistant determines whether the page contains responses that should be used in determining the student's score. If it does, the item with which the extra page is associated is indicated on the label. This extra page is kept with the corresponding original response document page throughout processing so that scoring staff can assign the correct score to the student. If the State has determined these responses are not to be scored, they are not sent to the scoring centers, but they are archived.

The Contractor will utilize a double data correction process to achieve the highest level of quality and accuracy in MME student data. Data correction provides an opportunity to review and hand-correct the information contained on an answer document, such as fields with multiple bubbles, no bubbles, and leading or trailing spaces. The application is also used to correct demographic information, books with handwritten information that was not bubbled, duplicate answer document numbers, invalid data ranges specific to the current test administration, invalid barcodes, duplicate barcodes, and barcodes containing invalid check-digits.

Data correction operators will use a sophisticated computer data correction application that retrieves flagged data records and highlights the problem field on a computer screen so it can be resolved. The operator will compare the highlighted data to the original answer document and make any necessary corrections. A second operator will repeat this process. If both operators agree, the correction is written to the database. If, however, they disagree, the data is checked by a supervisor, who will make the final decision. Data Correction will continue until all flagged records are resolved.

To ensure accuracy, once a correction has been written to the database, the document is validated again to ensure the corrected edit has not created another error. All edits are recorded and tracked in databases, along with the user ID of the staff member making the edits. Performance is constantly and consistently reviewed to ensure that accuracy is maintained and to correct any detected problems.

After all flagged data is reviewed and corrected; selected student responses will be scored against the item answer keys. A validation process will be used to detect any potential answer key problems. The students' selected responses and correct answer indicators will be provided to MDE in the final data file.



3. Building in quality control checks: At all phases of production related to assessment materials and scanning student answer documents create data files [XML or flat text file format (see website [http://www.michigan.gov/documents/131038\\_36330\\_7.pdf](http://www.michigan.gov/documents/131038_36330_7.pdf) for the state's recommended XML specifications)] from the results. The Contractor's quality assurance program has built-in control checks for the development of materials, scoring, and handling of all items. This includes, but is not limited to, verification of the scoring program, editing and resolution procedures for questionable answer documents (e.g., with multiple marks, poor erasures, or incomplete data), and combining and aggregating multiple-choice response scores with constructed-response scores at the school, district, county, and state levels. The Contractor will create data files in a flat file format acceptable to MDE. See above number two (2). The Contractor must be able to share assessment plans and results with the State for review and approval. The State has the option of adding assessment scenarios to determine if omissions are present.
4. Verifying: Data processing and programs are monitored to ensure accuracy. A well-designed test deck provides the best mechanism for verifying the accuracy of programs and processes. The execution of a test deck allows for the complete walkthrough of all processing systems and procedural steps producing a documented record of system readiness. The test deck is a 'living' document and is updated as new items or features are added to the project. The Contractor will work with MDE staff to develop a test deck which will provide complete coverage of all new and existing requirements as described in this Contract.

The test deck process has a very comprehensive set of rules, covering a wide range of scanning, scoring, and reporting scenarios, which will be applied to all appropriate grades and content areas. These rules provide verification that student barcode links join to the proper student information; header sheets associate students with the proper group or class; and school association information can be correctly linked to the proper district and ISD. The test deck rules include specifics for handling multiple-answer documents for a single student within a single content area. The Contractor will use an automated computer application that identifies similar students within a test administration and allows a review of the data and determine if multiple answer documents belong to the same student. This application also allows us to merge documents where necessary in order to produce aggregate scores for the student. We recognize that often there are students who take different portions of a test or tests on different days during test administration due to illness and other circumstances. The Contractor's programming staff follows the reporting rules to the letter to ensure that multiple-answer documents are handled appropriately.

Each MDE assessment test deck will be composed of various test documents including answer documents that have been bubbled in order to meet a variety of requirements. These requirements include specific circumstances defined by MDE as well as specific circumstances defined by the Contractor. The documents will be created in an attempt to provide as many different scenarios as possible with regard to scanning, scoring, and reporting of the data. There will be at least one (1) test case for each scenario; each test case will require that we either validate the data that is being captured at scanning or manipulate the data correctly (calculations, overrides, etc.) to yield the appropriate results at the end of the process. In addition, some scenarios will have multiple test cases. There may be some scenarios that, although not necessary to validate the software functionality, may be necessary to provide MDE with scenarios for their own special analysis of particular assessment situations. The Contractor's QA department will prepare the test deck documents as soon as answer folders are available from the printer. The test deck will include both base test answer folders and emergency test answer folders.

The Customer Acceptance Testing (CAT) process is divided into multiple stages. The purpose of CAT Part 1 will be to verify the accuracy of the VSC™ capture scanning equipment only. After the test deck documents are scanned, the scan data will be exported into a data file that will be provided to the MDE staff. Hardcopies and images of the test deck documents will also be provided. In addition, a "user friendly" PDF file of the data (Data Summary Sheet) will be formatted and provided for use as a guide in comparing the documents with the scan data. The Contractor will add additional information to the test plan to aid the MDE staff in locating the hardcopies of the test documents within the stack of materials. The data produced will be "raw" scan data. The only data correction processes performed on the data at this point are those needed for the VSC™ to complete its export function. CAT Part 1 will be solely to confirm the accuracy of the scan data. Any problems found during the process will be communicated to Contractor scanning staff to make corrections to the scanning program in a timely manner. After acceptance of the scan data, the process will move forward to the next stage of CAT. CAT Part 1 should take place in Durham, NC and at least two MDE representatives should take part in the process.



The purpose of CAT Part 2 will be to verify the accuracy of the scoring and data entry systems and processes developed for the MDE assessments by Contractor's IT department. After CAT Part 1 is completed, the test deck data will be run through Contractor's data entry processes in order to clean up the data in preparation for score reporting. After data entry is completed, the score data will be exported into a data file that will be provided to the MDE. The same hardcopies and images of the test deck documents that are used in CAT Part 1 will also be used in CAT Part 2. In addition, copies of the hand-scoring score sheets will be provided for comparison between the hand-scores in the data and the scores on the documents. Also, a Data Summary Sheet will be provided for use as a guide to compare the documents to the score data. When reviewing data for this stage of CAT, it will be important that the reviewer refer to the test plan for each case so that any discrepancies with expected results may be resolved. Contractor will add information to the test plan to aid the MDE in determining expected results. CAT Part 2 will only be concerned with the accuracy of the score data and data entry to validate that the correct score look-up table is being read and applied properly within Contractor's software systems. During CAT Part 2, any problems discovered during the process are communicated to the Contractor as they are found so that corrections to the scoring program are made in a timely manner. After acceptance of the score data, the process will move forward to the next stage of CAT. CAT Part 2 should take place in Lansing, Michigan. Contractor employee who is familiar with the CAT process will be on-site to help in any way required.

After CAT Part 2 is complete, Contractor will develop a reporting extract file that includes, at a minimum, test reporting scenarios for each performance level within each content area, across all single administration types and all possible combination administration types. The Contractor will ensure that the extract file includes:

- Reporting scenarios for students with a complete set of MME answer documents (day 1, day 2, and day 3).
- Reporting scenarios for students with a partial set of MME answer documents. One student for each of the following combinations of answer document: Day 1 only, Day 2 only, Day 3 only, Day 1 and day 2 only, Day 1 and day 3 only, Day 2 and day 3 only.
- Sufficient records for each reporting subgroup to have more than 10 students within a school, and each reporting subgroup to have less than 10 students within a school.
- Test scenarios for each situation in which a student would not meet "attemptedness" for each content area.

The purpose of CAT Part 3 will be to verify the accuracy of the reporting processes. After CAT Part 2 is completed, the test deck data will be run through Contractor's reporting processes in order to generate a reporting data file. After the reporting data file is generated, sample reports will be generated using the test deck data. The reports will be generated in two (2) phases: first, the comprehensive and item analysis reports will be generated; second, the remaining reports will be generated. The reports, the data file used to generate them, and a Data Summary Sheet will be provided to the MDE. In this phase of CAT, the reviewer will be required to take into account what should have happened to an answer folder and whether or not it happened correctly. Reporting rules and overrides will have been applied during processing to reach this stage and should be taken into account when this data is reviewed. The reporting rule covered by specific test cases will be noted in the expected results column of the test plan. CAT Part 3 is only concerned with the accuracy of the reports as compared to the data used to generate them. During CAT Part 3, any problems discovered during the process are communicated to Contractor as they are found so that the Contractor can make the corrections to the reporting program in a timely manner. After acceptance of the reporting data, the process moves forward to the next stage of CAT. CAT Part 3 should take place in Livonia, Michigan and at least two (2) MDE representatives should take part in the process. The Contractor will have personnel on site to support the process.

The purpose of the Sample Production Deck Reports CAT will be to verify that "live" data is being reported in the same manner as the test deck data. After CAT Part 3 is completed, a production deck sample will be used to generate a new extract reporting file. This sample will include several public and private schools (identified by the MDE staff), as well as district, ISD, and state-level data (using only the CAT schools selected by MDE). Samples of all reports will be provided along with the data file used to generate the reports. A Data Summary Sheet will not be provided during this part of customer acceptance because the actual reports will serve that purpose. Sample Production Deck Reports CAT will only be concerned with the accuracy of the reports with regard to "live" data. The focus will be on a comparison of the reports and the data used to generate them. If any problems are found, they are communicated to Contractor immediately so that corrections to the reporting program can be made in a timely manner. After acceptance of the production deck reporting data, the process will move forward to the last stage of CAT. The purpose of the Production Deck Final Reports CAT will be to verify that the final reports are generated as expected.



After the Sample Production Deck Reports CAT is completed, Contractor will generate a final reporting file ("extract"). This file will be used to generate the final reports. This file will be considered the final file; no additional files should need to be generated. The focus of this final stage will be on the layout and structure of the reports as verified during the Sample Production Deck Reports CAT. No changes should need to be made during this stage of the process. Any changes made, no matter how slight, will require that the final reporting data file be generated again.

5. Checking output from scoring programs to ensure accuracy: The Contractor will work with MDE to select early-receipt answer documents from certain districts and other special educational entities to include in a large sample for preliminary item analyses. This sample will represent regular schools as well as charter schools, educational programs administered by the State, and private schools for the disabled. The sample at each grade level will have up to 10 schools in eight (8) regular districts and up to three (3) special districts or State facilities.

The Contractor will develop the sample selection guidelines for preliminary item analysis in conjunction with MDE staff. The Contractor will pre-select and propose a preliminary item analysis sample based on these guidelines. After the selection of the initial proposed sample, the list will be sent to MDE for approval and any additions. The preliminary item analysis sample will consist of students enrolled in eight (8) to nine (9) preliminary item analysis districts plus miscellaneous individual student records. The preliminary item analysis districts will include the following:

- A charter school
- At least one (1) school district with multiple schools for the same grade
- Districts taking the alternate form and any other districts with students receiving any special equating due to testing irregularities
- A sample from all grades

All together, the preliminary item analysis districts will be distributed over the full range of ISDs, but will not necessarily represent each ISD. A different set of districts will be chosen for each administration. In addition to the preliminary item analysis districts, miscellaneous individual student records may also be included, as follows:

The preliminary item analysis will include a minimum of five (5) Braille and five (5) large-print students in each grade testing in all content areas since these students may have certain items omitted, leading to different maximum cluster scores. If there are not enough Braille and large print students in the preliminary item analysis districts, more students from other districts will be added.

Any miscellaneous problem answer documents that MDE wants to monitor will be included. These may be added before or after the initial preliminary item analysis sample has been selected.

Contractor staff will prepare a plan for a set of preliminary item analyses and present it to the OEAA for review and approval. Upon OEAA approval of the plan, Contractor staff will implement it, using samples as identified per the preceding paragraphs and producing the following item statistics:

- Adjusted p-values (the average score divided by the maximum possible score);
- Item standard deviation;
- Option frequencies (percents) for MC items;
- Score frequencies (percents) for CR items;
- Omit frequencies (percents);
- Number of respondents;
- Corrected item-total score correlations;
- Difficulty flag for extraordinarily difficult items for the overall population;
- Difficulty flag for extraordinarily easy items for the overall population;
- Flag for each incorrect option chosen more frequently than the correct option item-total correlation flag for low values indicating possible miss-key or poor item quality;
- Option-total correlation flags for high values on incorrect options indicating possible miss-key or poor item quality;
- Multiple mark flag for high percentages of multiple marks;
- Omit flag for high percentages of omits; and
- Form flag for significant differences in item statistics and frequencies by form.



The primary purpose of these analyses will be to verify the accuracy of scoring keys. Unusual p-values (percent correct) or corrected point-bi-serial correlations are very useful in detecting items that have been incorrectly keyed. Working with the MME Development Contractor and the OEAA, Contractor psychometricians will check suspicious items to verify their keys. The Contractor will prepare a final report on the preliminary item analysis and forward it to the OEAA and the other Administration Contractors for review. Should the Contractor discover an incorrectly keyed item or an item that seems not to be performing adequately, it will be reported to the OEAA prior to making any changes in the tests or scoring keys. The Contractor will lead this activity and work directly with the Development Contractor and OEAA staff. Upon written directions from the OEAA, Contractor IT staff will make the appropriate changes. The Contractor will time the entire process to make sure that no time is lost in the production of score reports.

6. Technical Reports on Operational Administrations and Field Testing: The MME Administration Contractor for College-Entrance and Work-Skills Tests will be responsible for all psychometric analyses. With respect to quality assurance in the preparation of Technical Reports, the Contractor will be primarily responsible for the accurate and timely transmittal of data to and from the other MME Contractors. Quality assurance in the description of the analyses is largely dependent upon the quality of the data themselves and the associated scanning, scoring, processing, and analysis procedures, as addressed in this Contract. The Contractor will prepare the relevant sections of the Technical Report with care and attention to detail. As described in Sections 1.104.D and 1.104.S, the Contractor will present analyses both in narrative form and through the illustrative use of tables and graphic displays to clearly communicate results. Working with the other MME Administration Contractors, and with the input of the OEAA and the TAC, Contractor will prepare and submit a draft Technical Report. Upon OEAA review, Contractor will make revisions and submit a final Technical Report to the OEAA and the TAC approval by August following each assessment cycle. The Contractor will distribute five (5) hard copies and one (1) electronic copy to the OEAA.

#### **1.104.R Independent Evaluation**

Evaluation of the MME is supported by its Technical Advisory Committee (TAC) that will independently monitor all assessment development and implementation processes, including information gathered in field assessment and review of item development. The TAC may also make recommendations for revisions in design, administration, scoring, processing, or use in the examination. Part of the work of this committee, in conjunction with OEAA staff and the representatives from the Administration Contractors, is to create an annual school survey regarding various aspects of the assessment administration process.

All MME Administration Contractors have the responsibility to answer questions and provide documentation requested by the TAC, and to attend TAC meetings when the agenda addresses topics that require their attendance.

#### **1.104.S Technical Reports**

The MME Administration Contractor for the College-Entrance and Work-Skills Tests is the lead Contractor for technical analyses of all MME components. The Contractor also has primary responsibility for writing the Technical Report. The Technical report will follow a specified format with sections specific to each of the MME assessment components so that it appears that all sections the Technical Report comes from the same office. The Contractor is responsible for coordinating the design and format of their Technical Report sections. The Technical Report is produced in sections; at the end of the MME spring cycle, a consolidated, complete technical report with all sections and all MME components administered is to be produced with the leadership of the MME Administration Contractor.

The Contractor's Technical Report will consist of three (3) volumes as described in the Contract report outline in Appendix F. Where it makes sense, analyses are to be presented in every case for the following three (3) groups within each grade:

- Traditional Public Schools
- Charter schools
- Non-Public Schools

The Contract report must also contain copies of all forms of assessment materials, manuals, handbooks, answer documents, header sheets (if required), barcode labels, scannable answer documents, each type of report, and any other assessment materials produced during the assessment cycle.

**1.104.T Psychometric and Statistical Analyses**

The MME Administration Contractor for College-Entrance and Work-Skills Tests will serve as the lead Contractor for all technical analyses. Details of all statistical analyses must be included in the Technical Report (Section 1.104.S).

The psychometric model currently used for the MME assessments is the Generalized Partial Credit Model as implemented in Parscale. The equating design is a fully pre-equated design in which all operational items have stable item statistics from large-scale field tests as items embedded in field-test positions on operational assessments with post-equating checks. All psychometric analyses are the responsibility of the College-Entrance/Work-Skills Contractor.

**Non-Psychometric Analyses**

The Contractor will perform statistical analyses and/or tabulations of the proportions of students tested, proportions of students identified through each procedure (Pre-ID, XXXX), number of customer service cases, number of multiply-coded responses, number of aberrant response-patterns detected, number of accommodated students, number of deviations from normal assessment procedures, and number of changes to student data by demographic characteristics of schools (e.g. urban/suburban/small town/rural, economic disadvantage, proportion minority, school size, etc.). Additionally, analyses must use procedures for identifying specific outlying schools in these distributions.

Industry-standard measures of scanning and scoring reliability and validation for multiple-choice items will be employed. These measures are to include, but are not limited to, detection or erasures, multiple marks, omit, and stray marks.

**1.104.U OEAA Access to MME Contractor's Primary Project Manager(s)**

OEAA shall have direct access to the MME Contractor's and its subcontractors' primary project manager(s) assigned to the various OEAA assessments. Direct access shall be available from 8:00 AM until 5:00 PM EST/EDT, Monday through Friday, throughout the duration of this Contract. Additional hours of direct access shall be available, as appropriate, to current tasks (e.g. printing may occur over the weekend and at nights, websites may go down outside office hours). Such access shall be by cell phone or home phone number. When the Contractor's (or its subcontractors') primary project manager(s) are sporadically unavailable (e.g. vacation, illness, travel), OEAA shall have the same access to a designated proxy who is knowledgeable on current issues.

**1.200 Roles and Responsibilities****1.201 Contractor Staff – Roles and Responsibilities**

Key personnel contract roles:

- Contract project manager – Kathy Jansen
- Operations manager – Tom deGuehery (scanning)
- Production manager(s) – Amy Gery (printing), Steve Heavner (editing)
- Distribution manager – Joe Martin
- Scoring/reporting manager(s) – Jeri English
- Lead psychometricians – Arianto Wibowo, Irene Hendrawan
- Information Technology:
  - IT project manager – Rose Swain
  - Database administrator – Paula Mabunga
  - Resource lead for each IT system module – Nelson Androes (VP IT Services)
  - Architect – N/A
- Call center manager – Shana Scudder
- Committee meeting coordinator(s) – Janet Sammons



## 1.202 State Staff – Roles and Responsibilities

### MDE Contract Project Coordinator & Manager (OEAA Project Manager)

James Griffiths  
Manager, Assessment Administration  
Michigan Department of Education

### Financial Officer

Al Gat  
Financial Manager, OEAA  
Michigan Department of Education

### Information Systems Project Specialist

David Judd  
Department Project Specialist, OEAA  
Michigan Department of Education

### Information Technology Project Manager

Scott Thompson  
Client Service Director for OEAA/CEPI  
Department of Information Technology

### Contract Compliance Inspector

Joseph Martineau, Interim Director  
Office of Educational Assessment & Accountability  
Department of Education

## 1.203 Other Roles and Responsibilities

Assessment items will be developed under a separate Contract. The Contract for item development will overlap with the timeframe of this Contract. The assessment item developer and other MDE staff will be responsible for creating, evaluating, designing and selecting all operational and pilot items for the assessments. They will also be responsible for designing the layout of the assessment materials and the try-out of new items requiring less than 100 students.

## 1.300 Project Plan

### 1.301 Project Plan Management

This Contract covers three (3) academic years. The timeline for all three (3) academic years (2008-09, 2009-10, and 2010-11) is illustrated in Section 1.104.D. Any adjustments to major deliverable deadlines (i.e. students taking assessments or reporting results) can only be approved by the CCI.

The Contractor will maintain the project plan and timeline on a continuous basis. Any changes to the timeline shall be communicated to the CCI and designated OEAA staff in writing explaining the reason for the change and the impact to the overall schedule.

### 1.302 Reports

The MME Contractor will provide reports to the CCI and all appropriate parties illustrating the plan and timeline for the respective assessment cycle at the beginning of each Kick-Off meeting. Then follow up with a revised plan and timeline with any changes noted within five (5) business days after the conclusion of the respective Kick-Off meeting. If anything should arise after that point, the Contractor shall refer to **Section 1.401**.

## 1.400 Project Management

### 1.401 Issue Management

Issues are those things that endanger the project. It includes imminent threats and events that may have already occurred.



Once an issue(s) has (have) been identified by the Contractor, the Contractor shall follow these steps:

- Immediately communicate the issue in writing to the CCI, OEAA Director, the respective OEAA manager and other appropriate state staff.
- The Contractor will log it into an issue tracking system.
- Identify what needs to be done and resources needed to correct the issue.
- Receive approval from the CCI for appropriate action.
- Keep CCI and appropriate State staff informed on status of issue based on frequency established by the CCI.
- At least monthly, provide a listing of all issues with their current status, deadlines to correct and actual dates of completion that have occurred over the previous six months to the CCI.

#### 1.402 Risk Management

Risk and Issues are not the same. Risks are those things that you can assume or anticipate in a project. Issues are imminent threats or things that have already occurred.

Because the assessments within this Contract are large-scale and high-stakes, quality and deadlines are of the essence. Therefore, the risk assessment shall be reviewed, at minimum, during the Kick-Off meeting for each assessment cycle and shall include, but not limited to, the following:

- Reviewing the project plan and timelines to ensure resources are, or will be, available.
- Identify deadlines for items and assessment material designs to allow sufficient time to produce.
- Qualitative review and approval of assessment materials by OEAA staff designated by the CCI; at a minimum of the beginning, middle and end of production.
- Approval for actual quantities to produce shall be given in writing by the CCI, or designee.
- Accurate tracking of the delivery, retrieval, logging, scanning, and storage of all assessment materials.
- Preventative maintenance and accurate calibration of scanning equipment.  
Identify data management and backup procedures.

#### 1.403 Change Management

If a proposed Contract change is approved by the CCI, the CCI 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.**

Any changes to timelines or project deliverables shall be proposed to the CCI for approval prior to the change taking effect.

#### Alterations to the Statement of Work

If either of the parties wishes to alter the Specifications or the Statement of Work the following procedure will apply:

- a. The person who requests the change (the Originator) will forward to the OEAA Project Manager, a Change Control Request Form. Include a priority/classification on the request. This form must be completed as much as possible. It may be necessary at times if a lot of detail is required to include a Statement of Work (SOW).
- b. The OEAA Project Manager will assign a number to and log each Change Control Request.
- c. The OEAA Project Manager will consult with the DIT Project Manager, if the request is IT related.
- d. The OEAA Project Manager will send the Change Control Request (and SOW if included) to the Contractor.
- e. The Contractor will determine a cost and estimated time to complete and send this info back to the Project Manager.
- f. The OEAA Project Manager will negotiate the formal quote with the Contractor and determine if the change will be made.
- g. If the change is rejected or no confirmation is made, the change will not be implemented
- h. If the OEAA Project Manager agrees with the Contractor on the change, the Contractor will sign the Change Control Request.
- i. The OEAA Project Manager will send the signed Change Control Request (and SOW, if it was included), along with the Contractor quote to the CCI.
- j. The CCI will track all changes and determine the final approval process.



- k. Either the CCI or the Contract Administrator will send the Contractor, the DIT Project Manager, and the OEAA Project Manager, the approved Change Control Request (and SOW, if it was included).
- l. Upon approval of the Change Control Request, work can begin at the scheduled time.

#### 1.500 Acceptance

##### **1.501 Criteria**

The following criteria will be used by the State to determine Acceptance of the Services and/or Deliverables provided under this SOW:

- Materials produced match the design provided and approved in writing by the CCI.
- The quantity of materials produced equals what was approved in writing by the CCI.
- The quality of the materials meets the specifications of this Contract.
- The Content Advisory, Committee, Bias/Sensitivity Committee, Technical Advisory Committee and Standard Setting meetings conducted as specified within this Contract.
- All materials produced have been accurately tracked and current location is on record. Any materials considered lost, misplaced, or in a condition of not readable are not acceptable.
- All reports and data files meet the specification of this Contract.
- All designated reports and data files are delivered to the State with acceptance in writing from the CCI.
- All answer documents are stored in a secure and environmentally controlled location during the length of this Contract.
- All materials to be destroyed are done so in confidential manner.

##### **1.502 Final Acceptance**

Each assessment cycle is viewed as a project and is considered complete after:

- The CCI has approved the final reports.
- The final reports have been delivered to the appropriate location.
- All final data files related to the cycle have been transferred to the State and approved by the CCI.

#### 1.600 Compensation and Payment

##### **1.601 Compensation and Payment**

Notwithstanding any adjustments due to Article 2, compensation will be through an invoicing process for actual items and quantities approved in writing by the MDE CCI and actually provided/produced by the Contractor that meets the specification of this Contract and using the appropriate rates provided by the Contractor. With each invoice, the Contractor shall provide a report that lists, at a minimum, for each line item being billed, the quantities ordered, the quantities actually provided/produced, and the actual quantities used.

All rates for compensation are contained herein this Contract. All rates shall be stand-alone. If any line in the pricing list is reduced or increased in part, or in its entirety, it shall not affect that or any other price/rate. Quantities listed in this Contract are estimates and are not to be construed as an order. The Contractor must have written approval of quantities and/or tasks from the MDE CCI (or designee) before beginning work on any line item.

With the exception of severe market changes outside of the control of the Contractor, the Contractor will provide sufficient resources to complete the deliverables of this Contract within the established timelines. Lack of appropriate resource planning is not an acceptable reason for changing any price/rate. See Appendix H for pricing.

#### 1.700 Additional Terms and Conditions Specific to this SOW – Deleted N/A



## Article 2 – General Terms and Conditions

### 2.010 Contract Structure and Administration

#### **2.011 Definitions**

Capitalized terms used in this Contract (including its Exhibits) shall have the meanings given below, unless the context requires otherwise:

- (a) "Days" means calendar days unless otherwise specified.
- (b) "24x7x365" means 24 hours a day, seven (7) days a week, and 365 days a year (including the 366th day in a leap year).
- (c) "Additional Service" means any Services/Deliverables within the scope of this 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. "Additional Service" does not include New Work.
- (d) Deleted N/A.
- (e) "Audit Period" see **Section 2.111**.
- (f) "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.
- (g) "Incident" means any interruption in Services.
- (h) "Business Critical" means any function identified in any Statement of Work as Business Critical.
- (i) "Deliverable" means physical goods and/or commodities as required or identified by a Statement of Work
- (j) "Key Personnel" means any Personnel designated in **Section 1.201 and/or 1B.202**.
- (k) "New Work" means any Services/Deliverables outside the scope of this 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. "New Work" does not include Additional Service.
- (l) "Services" means any function performed for the benefit of the State.
- (m) "State Location" means any physical location where the State performs work. State Location may include state-owned, leased, or rented space.
- (n) "Subcontractor" means 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.
- (o) "Work in Process" means a Deliverable that has been partially prepared, but has not been presented to the State for Approval.

#### **2.012 Attachments and Exhibits**

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

#### **2.013 Statements of Work**

- (a) 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, or an amendment to this Contract (**see Section 2.106**). Contractor shall perform in accordance with this Contract, including the Statements of Work/Purchase Orders executed under it.
- (b) Unless otherwise agreed by the parties, each Statement of Work (as defined in Article 1) will include, or incorporate by reference to the appropriate Contract Article 1 Attachment containing, the following information:
  - description of the Services to be performed by Contractor under the Statement of Work;
  - project schedule (including the commencement and completion dates for all tasks, subtasks (for all projects of sufficient duration and complexity to warrant sub task breakdown), and Deliverables;
  - list of the Deliverables to be provided, if any, including any particular specifications and acceptance criteria for such Deliverables, and the dates on which the Deliverables are scheduled to be completed and delivered to the State;
  - all Deliverable price schedules and other charges associated with the Statement of Work, the overall fixed price for such Statement of Work and any other appropriate pricing and payment terms;
  - specification of Contractor's and the State's respective performance responsibilities with respect to the performance or completion of all tasks, subtasks and Deliverables;



- listing of any Key Personnel of Contractor and/or its Subcontractors for that Statement of Work and any future Statements of Work;
- any other information or provisions the parties agree to include.

(c) Deleted N/A.

(d) The initial Statements of Work, as of the Effective Date, are attached to this Contract.

#### 2.014 Issuing Office

This Contract is issued by the Department of Management and Budget, Purchasing Operations (“Purchasing Operations”) and Department of Education (MDE) (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 this 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 Contractor Administrator within Purchasing Operations for this Contract is:

Lance Kingsbury  
 Purchasing Operations - DMB  
 Mason Bldg, 2nd Floor  
 PO Box 30026  
 Lansing, MI 48909  
[kingsburyl@michigan.gov](mailto:kingsburyl@michigan.gov)  
 517.241.3768

#### 2.015 Contract Compliance Inspector (CCI)

Upon receipt at Purchasing Operations of the properly executed Contract, it is anticipated that the Director of DMB Purchasing Operations, in consultation with MDE, will direct that the person named below, or any other person so designated, be authorized to monitor and coordinate the activities for this Contract on a day-to-day basis during its term. However, monitoring of this Contract implies **no authority to change, modify, clarify, amend, or otherwise alter the prices, terms, conditions and specifications of such Contract as that authority is retained by Purchasing Operations.** The CCI for this Contract is:

Joseph Martineau  
 Office of Educational Assessment & Accountability  
 Department of Education  
 PO Box 30008  
 Lansing, MI 48909  
[martineauj@michigan.gov](mailto:martineauj@michigan.gov)  
 517.241.4710

#### 2.016 Project Manager

The following individual will oversee the project:

James Griffiths  
 Office of Educational Assessment & Accountability  
 Department of Education  
 P.O. Box 30008  
 Lansing, MI 48909

2.020 Contract Objectives/Scope/Background – Deleted N/A

2.030 Legal Effect and Term

#### 2.031 Legal Effect

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 this Contract has been issued.

**2.032 Contract Term**

This Contract term is from August 15, 2008 through September 30, 2011. All outstanding Purchase Orders shall also expire upon the termination (cancellation for any of the reasons listed in 2.210) of this Contract, unless otherwise extended pursuant to this Contract. Absent an early termination for any reason, Purchase Orders issued but not expired, by the end of this Contract's stated term, will remain in effect for the balance of the fiscal year for which they were issued.

**2.033 Renewal(s)**

This Contract may be renewed in writing by mutual agreement of the parties not less than 30 days before its expiration. This Contract may be renewed for up to two (2) additional one (1) year periods. Successful completion of negotiations surrounding the terms of the extension, will be a pre-requisite for the exercise of any option year.

2.040 Contractor Personnel**2.041 Contractor Personnel**

- (a) **Personnel Qualifications.**  
All persons assigned by Contractor to the performance of Services under this Contract shall be employees of Contractor or its majority-owned (directly or indirectly, at any tier) subsidiaries (or a State-approved Subcontractor) and shall be fully qualified to perform the work assigned to them. Contractor shall 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 shall be treated by the State as if they were employees of Contractor for the Contract only; however, the State understands that the relationship between Contractor and Subcontractor is an independent Contractor relationship.
- (b) **Key Personnel**
- (i) In discharging its obligations under this Contract, Contractor shall provide the named Key Personnel on the terms indicated.
  - (ii) Key Personnel shall be dedicated 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.
  - (iii) 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. Additionally, the State's request shall be based on legitimate, good-faith reasons. Proposed alternative for the individual denied, shall be fully qualified for the position.
  - (iv) Contractor shall not remove any Key Personnel from their assigned roles or this Contract without the prior written consent of the State. If the Contractor does remove Key Personnel without the prior written consent of the State, it shall be considered an unauthorized removal ("Unauthorized Removal"). It shall not be considered an Unauthorized Removal if Key Personnel must be replaced 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. It shall not be considered an Unauthorized Removal if Key Personnel must be replaced 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 shall 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 this Contract, in respect of which the State may elect to exercise its rights under Section 2.210.
- (c) **Re-assignment of non-Key Personnel.**  
Prior to re-deploying to other projects, at the completion of their assigned tasks on the Project, teams of its non-Key Personnel who are performing Services on-site at State facilities or who are otherwise dedicated primarily to the Project, Contractor will give the State at least 10 Business Days notice of the proposed re-deployment to give the State an opportunity to object to the re-deployment if the State reasonably believes such team's Contract responsibilities are not likely to be completed and approved by the State prior to the proposed date of re-deployment.



- (d) **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 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 personnel for the removed person shall 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 such incident with removed personnel results in delay not reasonable anticipatable under the circumstances and which is attributable to the State, the applicable SLAs for the affected Service will not be counted in **Section 2.076** for a time as agreed to by the parties.
- (e) **Staffing Levels.**
- (i) All staff requirements not specified in the applicable Statement of Work or State-approved project plan as State personnel will be supplied by Contractor. This includes secretarial, clerical, and Contract administration support staff necessary for Contractor to perform its obligations hereunder.
  - (ii) Contractor shall provide sufficient personnel resources for the completion of Contract tasks indicated in Contractor's project plan approved by the State. If the level of personnel resources is insufficient to complete any Contractor Contract tasks in accordance with this Contract time schedule as demonstrated by Contractor's failure to meet mutually agreed to time schedules, Contractor shall promptly add additional qualified personnel resources to the performance of the affected tasks, at no additional charge to the State, in an amount sufficient to complete performance of Contractor's tasks in accordance with this Contract's time schedule.
- (f) **Personnel Turnover.**  
The Parties agree that it is in their best interests to keep the turnover rate of employees of Contractor and its Subcontractors who are performing the Services to a reasonable minimum. Accordingly, if the State determines that the turnover rate of such employees is excessive and so notifies Contractor, Contractor will meet with the State to discuss the reasons for the turnover rate and otherwise use commercially reasonable efforts to minimize such turnover rate. If requested to do so by the State, Contractor will submit to the State its proposals for reducing the turnover rate to an acceptable level. In any event, notwithstanding the turnover of personnel, Contractor remains obligated to perform the Services without degradation and in accordance with the State-approved Contract schedule.
- (g) **Location.**  
All staff assigned by Contractor to work on this 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.

#### **2.042 Contractor Identification**

Contractor employees shall 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.

#### **2.043 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, and, as reasonably requested by the State, to provide to the State's agents and other contractors with reasonable access to Contractor's Project personnel, systems and facilities to the extent they relate to activities specifically associated with this Contract and will not interfere or jeopardize the safety or operation of the systems or facilities and provided Contractor receives reasonable prior written notice of such request. The State acknowledges that Contractor's time schedule for this Contract is very specific and agrees not to unnecessarily or unreasonably interfere with, delay or otherwise impeded Contractor's performance under this Contract with such requests for access.

#### **2.044 Subcontracting by Contractor**

- (a) 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.



- (b) 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.
- (c) In any subcontracts entered into by Contractor for the performance of the Services, Contractor shall require the Subcontractor, to the extent of the Services to be performed by the Subcontractor, to be bound to Contractor by the terms of this Contract and to assume toward Contractor all of the obligations and responsibilities that Contractor, by this Contract, assumes toward the State. The State reserves the right to receive copies of and review all subcontracts, although Contractor may delete or mask any proprietary information, including pricing, contained in such contracts before providing them to the State. The management of any Subcontractor 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.
- (d) Except where specifically approved in writing by the State on a case-by-case basis, Contractor shall flow down the obligations in **Sections 2.040, 2.110, 2.150, 2.160, 2.171(c), 2.172(b), 2.180, 2.260, 2.276, 2.297** in all of its agreements with any Subcontractors.
- (e) The Contractor shall select subcontractors (including suppliers) on a competitive basis to the maximum practical extent consistent with the objectives and requirements of this Contract.

#### **2.045 Contractor Responsibility for Personnel**

Contractor shall be responsible for all acts and omissions of its employees, as well as the acts and omissions of any other personnel furnished by Contractor to perform the Services.

#### 2.050 State Standards

#### **2.051 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>.

#### **2.052 PM Methodology Standards**

The State has adopted a standard documented Project Management Methodology (PMM) for use on all Information Technology (IT) based projects. See the State's PMM website at <http://www.michigan.gov/projectmanagement>.

The Contractor shall use the State's PPM to manage this Contract. If the Contractor requires training on the PMM, those costs shall be the responsibility of the Contractor, unless otherwise stated.

#### **2.053 Adherence to Portal Technology Tools**

The State has adopted the following tools for its Portal Technology development efforts:

- Vignette Content Management and personalization Tool
- Inktomi Search Engine
- E-Pay Payment Processing Module
- Websphere Commerce Suite for e-Store applications

Unless otherwise stated, Contractor must use the Portal Technology Tools to implement web content management and deployment efforts. Tools used for web-based application development must work in conjunction with Vignette and Inktomi. The interaction with Vignette and Inktomi must be coordinated with DIT, Enterprise Application Services Office, e-Michigan Web Development team.



Contractors that are compelled to use alternate tools must have received an exception from DIT, Enterprise Application Services Office, e-Michigan Web Development team, before this Contract is effective.

#### **2.054 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/dit>. All Contractor employees must be required, in writing, to agree to the State's Acceptable Use Policy before accessing the State system. The State reserves the right to terminate Contractor's access to the State system if a violation occurs.

#### 2.060 Deliverables

##### **2.061 Ordering**

Any Services/Deliverables to be furnished under this Contract shall be ordered by issuance of written Purchase Orders/Blanket Purchase Order by the State after approval by the Contract Administrator or his/her designee. All orders are subject to the terms and conditions of this Contract. In the event of conflict between an order and this Contract, this Contract shall take precedence as stated in **Section 2.293**. In no event shall any additional terms and conditions contained on a Purchase Order/Blanket Purchase Order be applicable, unless specifically contained in that Purchase Order/Blanket Purchase Order's accompanying Statement of Work.

##### **2.062 Software – Deleted N/A**

##### **2.063 Hardware – Deleted N/A**

##### **2.064 Equipment to be New and Prohibited Products**

###### (a) Equipment to be New

If applicable, all equipment provided under this Contract by Contractor shall be new where Contractor has knowledge regarding whether the equipment is new or assembled from new or serviceable used parts that are like new in performance or has the option of selecting one or the other. Equipment that is assembled from new or serviceable used parts that are like new in performance is acceptable where Contractor does not have knowledge or the ability to select one or other, unless specifically agreed otherwise in writing by the State.

###### (b) Prohibited Products

The State will not accept salvage, distressed, outdated or discontinued merchandise. Shipping of such merchandise to any State agency, as a result of an order placed against this Contract, shall be considered default by the Contractor of the terms and conditions of this Contract and may result in cancellation of this Contract by the State. The brand and product number offered for all items shall remain consistent for the term of this Contract, unless Purchasing Operations has approved a change order pursuant to **Section 2.106**.

#### 2.070 Performance

##### **2.071 Performance, In General**

The State engages Contractor to execute this Contract and perform the Services/provide the Deliverables, and Contractor undertakes to execute and complete this Contract in its entirety in accordance with the terms and conditions of this Contract and with the participation of State representatives as specified in this Contract.

##### **2.072 Time of Performance**

- (a) Contractor shall use commercially reasonable efforts to provide the resources necessary to complete all Services and Deliverables in accordance with the time schedules contained in the Statements of Work and other Exhibits governing the work, and with professional quality.
- (b) Without limiting the generality of **Section 2.072(a)**, Contractor shall notify the State in a timely manner upon becoming aware of any circumstances that may reasonably be expected to jeopardize the timely and successful completion of any Deliverables/Services on the scheduled due dates in the latest State-approved delivery schedule and, in such event, shall inform the State of the projected actual delivery date.
- (c) If Contractor believes that a delay in performance by the State has caused or will cause Contractor to be unable to perform its obligations in accordance with specified Contract time periods, Contractor shall notify the State in a timely manner and shall use commercially reasonable efforts to perform its obligations in accordance with such Contract time periods notwithstanding the State's failure. Contractor will not be in default for a delay in performance to the extent such delay is caused by the State.



### 2.073 Liquidated Damages

The State and the Contractor hereby agree to the specific standards set forth in this Contract. It is agreed between the Contractor and the State that the actual damages to the State as a result of Contractor's failure to provide promised services would be difficult or impossible to determine with accuracy. The State and the Contractor therefore agree that liquidated damages as set out herein shall be a reasonable approximation of the damages that shall be suffered by the State as a result thereof. Accordingly, in the event of such damages, at the written direction of the State, the Contractor shall pay the State the indicated amount as liquidated damages, and not as a penalty. Amounts due the State as liquidated damages, if not paid by the Contractor within 15 days of notification of assessment, may be deducted by the State from any money payable to the Contractor pursuant to this Contract. The State will notify the Contractor in writing of any claim for liquidated damages pursuant to this paragraph on or before the date the State deducts such sums from money payable to the Contractor. No delay by the State in assessing or collecting liquidated damages shall be construed as a waiver of such rights.

The Contractor shall not be liable for liquidated damages when, in the opinion of the State, incidents or delays result directly from causes beyond the control and without the fault or negligence of the Contractor. Such causes may include, but are not restricted to, acts of God, fires, floods, epidemics, and labor unrest; but in every case the delays must be beyond the control and without the fault or negligence of the Contractor.

Liquidated damages will be assessed as follows:

There are five (5) areas in which the performance of the selected Contractor will be most closely monitored. For each of these areas, there is a penalty for failure to perform or to perform adequately. These are listed below:

(1) Materials Distributed to School Districts on Time:

As indicated in this Contract, all necessary assessment materials are to be in school districts no later than two (2) weeks prior to assessment. This date presumes that the Department staff has met their portion of the schedule. If not, the schedule will be adjusted accordingly, and the revised schedule will be used for determination of whether the Administration Contractor has met this portion of the requirements of this Contract. **Failure to meet this requirement:** \$10,000 per business day for any or all materials missing from any or all Michigan school districts.

(2) All Answer Documents Returned for Scoring:

It is essential that the Contractor, as well as its shipping Contractor(s), understand that they are responsible for the accurate return of every students' answer folders for scoring. This means having a system or systems in place to track the student answer folders from each local district through the shippers' systems to the Administration Contractor and its log-in process. It is a requirement of this Contract that no answer folders are lost or destroyed. The ideal system would permit local districts to "order" return services, receive shipping materials and instructions, enter the shipments into the shippers' system(s), track the shipments at all points, and be notified when the shipments are received at the Administration Contractor. From the Administration Contractor's perspective, the system should be able to indicate that the shipment has been entered into the shippers' system(s), indicate how many boxes are being returned, track their progress through the shippers' system(s), and indicate that all materials have been received (or which materials are missing so that they can be followed up on).

**Failure to meet this requirement:** \$75 per answer document lost.

(3) Assessment Results are Accurate:

It is essential to the credibility of the OEAA assessments that the results produced are accurate. This means that each level of reporting (individual student, parent, classroom, school, and/or district) must be accurate. This Contract has a number of steps for quality control in it, so it should be possible for the Administration Contractor to produce accurate data. However, this penalty applies to any or all reports within any one (1) school district.

**Failure to meet this requirement:** \$10,000 per district in which a reporting error has occurred. This is the total assessable for any and all errors in a district for all of the assessments at any grade or subject area.

(4) Scanning, scoring, and reporting systems verified with a test deck by October 1 of each year:

Failure to provide a fully functional scanning, scoring, and reporting production system including all reports by that date will result in liquidated damages of \$10,000/day, including weekends and holidays, until the systems are approved to the satisfaction of the CCI for OEAA or his or her designee.

(5) Assessment Results Returned on Time:

It is essential to the credibility of the OEAA assessments that the results be returned on time. This date presumes that the Department staff has met their portion of the schedule. If not, the schedule will be adjusted accordingly, and the revised schedule will be used for determination of whether the Administration Contractor has met this portion of the requirements of this Contract.

Starting on the 35<sup>th</sup> day after answer documents have been logged at Contractor's initial receiving site, assessment results must be available for the related school district(s). "Logged" is defined as the time when the barcode on the inbound shipping label on each box is scanned via hand held scanner at Contractor's receiving area. Answer documents must be logged within 24 hours of receipt from shipping agent.

**Failure to meet this requirement:** \$100,000 per week day (including weekends) that the results from any or all districts that have not been posted electronically or printed and shipped to school districts (whichever occurs earlier). To avoid the assessment of liquidated damages, the individual student results and the classroom summaries need to be available to local school districts, by the 35<sup>th</sup> day.

If a document(s) is placed on hold for a non-Contractor related reason, the hold time does not count toward the 34 days. Time elapsed before the document is officially placed on hold and time after the hold is released does count toward the 34 days.

The total sum of the Liquidated Damages shall not exceed 10% of an assessment cycle's estimated Contract total value.

**2.074 Bankruptcy**

If Contractor shall file for protection under the bankruptcy laws, or if an involuntary petition shall be filed against Contractor and not removed within 30 days, or if the Contractor becomes insolvent, be adjudicated bankrupt, or if it should make a general assignment for the benefit of creditors, or if a receiver shall be appointed due to its insolvency, and Contractor and/or its affiliates are unable to provide reasonable assurances that Contractor and/or its affiliates can deliver the services provided herein, 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 such Works in Process by whatever appropriate method the State may deem expedient. Contractor will fix appropriate notices or labels on the Work in Process to indicate ownership by the State. To the extent reasonably possible, materials and Work in Process shall be stored separately from other stock and marked conspicuously with labels indicating ownership by the State.

To secure the State's progress payments before the delivery of any services or materials required for the execution of Contractor's obligations hereunder, and any work which Contractor may subcontract in the support of the performance of its obligations hereunder, title shall vest in the State to the extent the State has made progress payments hereunder.

**2.075 Time is of the Essence**

The Contractor agrees that time is of the essence in the performance of the Contractor's obligations under this Contract.

**2.076 Service Level Agreements (SLAs) – Deleted N/A**2.080 Delivery and Acceptance of Deliverables**2.081 Delivery Responsibilities**

Unless otherwise specified by the State within an individual order, the following shall be applicable to all orders issued under this Contract:

- (a) Shipment responsibilities - Services performed/Deliverables provided under this Contract shall be delivered "F.O.B. Destination, within Government Premises." The Contractor shall have complete responsibility for providing all Services/Deliverables to all site(s) unless otherwise stated. Actual delivery dates will be specified on the individual purchase order.
- (b) Delivery locations - Services will be performed/Deliverables will be provided at every State of Michigan location within Michigan unless otherwise stated in the SOW. Specific locations will be provided by the State or upon issuance of individual purchase orders.
- (c) Damage Disputes - At the time of delivery to State Locations, the State shall examine all packages. The quantity of packages delivered shall be recorded and any obvious visible or suspected damage shall be noted at time of delivery using the shipper's delivery document(s) and appropriate procedures to record such.



Where there is no obvious or suspected damage, all deliveries to a State Location must be opened by the State and the contents inspected for possible internal damage not visible externally within 14 days of receipt. Any damage must be reported to the Contractor within five (5) days of inspection. If this inspection does not occur and damages not reported within 30 days of receipt, the cure for such damaged deliveries shall transfer to the delivery signing party.

### **2.082 Delivery of Deliverables**

Where applicable, the Statements of Work/POs contain lists 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"), a good ("Physical Deliverable") or a Service. All Deliverables shall be completed and delivered for State review and written approval and, where applicable, installed in accordance with the State-approved delivery schedule and any other applicable terms and conditions of this Contract.

### **2.083 Testing**

- (a) Prior to delivering any of the above-mentioned Statement of Work Physical Deliverables or Services to the State, Contractor will first perform all required quality assurance activities to verify that the Physical Deliverable or Service is complete and in conformance with its specifications listed in the applicable Statement of Work or Purchase Order. Before delivering a Physical Deliverable or Service to the State, Contractor shall certify to the State that (1) it has performed such quality assurance activities, (2) it has performed any applicable testing, (3) it has corrected all material deficiencies discovered during such quality assurance activities and testing, (4) the Deliverable or Service 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.
- (b) If a Deliverable includes installation at a State Location, then Contractor shall (1) perform any applicable testing, (2) correct all material deficiencies discovered during such quality assurance activities and testing, and (3) inform the State that the Deliverable is in a suitable state of readiness for the State's review and approval. To the extent that testing occurs at State Locations, the State shall be entitled to observe or otherwise participate in testing.

### **2.084 Approval of Deliverables, In General**

- (a) All Deliverables (Physical Deliverables and Written Deliverables) and Services require formal written approval by the State, in accordance with the following procedures. Formal approval by the State requires that the Deliverable be confirmed in writing by the State to meet its specifications, which will include the successful completion of Testing as applicable in **Section 2.083**, to be led by the State with the support and assistance of Contractor. 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.
- (b) The State's obligation to comply with any State Review Period is conditioned on the timely delivery of Deliverables/Services being reviewed.
- (c) Prior to commencement of its review or testing of a Deliverable/Service, the State may inspect the Deliverable/Service to confirm that all components of the Deliverable/Service have been delivered without material deficiencies. If the State determines that the Deliverable/Service has material deficiencies, the State may refuse delivery of the Deliverable/Service without performing any further inspection or testing of the Deliverable/Service. Otherwise, the review period will be deemed to have started on the day the State receives the Deliverable or the Service begins, and the State and Contractor agree that the Deliverable/Service is ready for use and, where applicable, certification by Contractor in accordance with **Section 2.083(a)**.
- (d) The State will approve in writing a Deliverable/Service upon confirming that it conforms to and, performs in accordance with, its specifications without material deficiency. The State may, but shall not be required to, conditionally approve in writing a Deliverable/Service 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/Service that remain outstanding at the time of State approval.
- (e) If, after three (3) opportunities (the original and two (2) repeat efforts), Contractor is unable to correct all deficiencies preventing Final Acceptance of a Deliverable/Service, 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) keep this Contract in force and do, either itself or through other parties, whatever Contractor has failed to do, in which event Contractor shall bear any excess expenditure incurred by the State in so doing beyond these Contract price(s) for such Deliverable/Service and will pay the State an additional sum equal to 10% of such excess expenditure to cover the State's general expenses provided the State can furnish proof of such general expenses; or (iii) terminate the particular Statement of Work for default, either in whole or in part by notice to Contractor provided Contractor is unable to cure such breach.



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.

- (f) The State, at any time and in its reasonable discretion, may halt the testing or approval process if such process reveals deficiencies in or problems with a Deliverable/Service 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 stop using the Service or return the applicable Deliverable to Contractor for correction and re-delivery prior to resuming the testing or approval process.

#### **2.085 Process For Approval of Written Deliverables**

The State Review Period for Written Deliverables will be the number of days set forth in the applicable Statement of Work following delivery of the final version of the Deliverable (failing which the State Review Period, by default, shall be five (5) Business Days for Written Deliverables of 100 pages or less and 10 Business Days for Written Deliverables of more than 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 Deliverable is approved in the form delivered by Contractor or describing any deficiencies that must be corrected prior to approval of the Deliverable (or at the State's election, subsequent to approval of the Deliverable). If the State delivers to Contractor a notice of deficiencies, Contractor will correct the described deficiencies and, within time specified in the notice, 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 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 Deliverable to confirm that the identified deficiencies have been corrected.

#### **2.086 Process for Approval of Services**

The State Review Period for approval of Services is governed by the applicable Statement of Work (failing which the State Review Period, by default, shall be 30 Business Days for Services). The State agrees to notify Contractor in writing by the end of the State Review Period either stating that the Service is approved in the form delivered by Contractor or describing any deficiencies that must be corrected prior to approval of the Services (or at the State's election, subsequent to approval of the Service). If the State delivers to Contractor a notice of deficiencies, Contractor will correct the described deficiencies and within 30 Business Days resubmit the Service 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 implementation of a corrected Service 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 Service for conformity and that the identified deficiencies have been corrected.

#### **2.087 Process for Approval of Physical**

The State Review Period for approval of Physical Deliverables is governed by the applicable Statement of Work (failing which the State Review Period, by default, shall be 30 continuous Business Days for a Physical Deliverable). The State agrees to notify Contractor in writing by the end of the State Review Period either stating that the Deliverable is approved in the form delivered by Contractor or describing any deficiencies that must be corrected prior to approval of the Deliverable (or at the State's election, subsequent to approval of the Deliverable). If the State delivers to Contractor a notice of deficiencies, Contractor will correct the described deficiencies and within 30 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 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 Deliverable to confirm that the identified deficiencies have been corrected.

#### **2.088 Final Acceptance**

Unless otherwise stated in the Statement of Work or Purchase Order, "Final Acceptance" of each Deliverable shall occur when each Deliverable/Service has been approved by the State following the State Review Periods identified in **Sections 2.080-2.087**. Payment will be made for Deliverables installed and accepted. Upon acceptance of a Service, the State will pay for all Services provided during the State Review Period that conformed to the acceptance criteria.

2.090 Financial**2.091 Pricing**

- (a) **Fixed Prices for Services/Deliverables**  
Each Statement of Work/PO 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. To the extent the parties agree that certain specific Services will be provided on a time and materials basis. The State may make progress payments to the Contractor when requested as work progresses, but not more frequently than monthly, in amounts approved by this Contract Administrator, after negotiation. Contractor must show verification of measurable progress at the time of requesting progress payments.
- (b) **Adjustments for Reductions in Scope of Services/Deliverables**  
If the scope of the Services/Deliverables under any Statement of Work issued under this Contract is subsequently reduced by the State, the parties shall negotiate an equitable reduction in Contractor's charges under such Statement of Work commensurate with the reduction in scope.
- (c) **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.
- (d) **Labor Rates – Deleted N/A**

**2.092 Invoicing and Payment Procedures and Terms**

- (a) **Invoicing and Payment – In General**
- (i) 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.
- (ii) 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. The charges for Services billed on a time and materials basis shall be determined based on the actual number of hours of Services performed. Invoices for Services performed on a time and materials basis will show, for each individual, the number of hours of Services performed during the billing period, the billable skill/labor category for such person and the applicable hourly billing rate. Prompt payment by the State is contingent on the Contractor's invoices showing the amount owed by the State minus any holdback amount to be retained by the State in accordance with **Section 2.094**.
- (iii) Correct invoices will be due and payable by the State, in accordance with the State's standard payment procedure as specified in 1984 Public Act No. 279, MCL 17.51 et seq., within 45 days after receipt, provided the State determines that the invoice was properly rendered.
- (b) **Taxes**  
The State is exempt from Federal Excise Tax, State and Local Sales Taxes, and Use Tax with respect to the sale to and use by it of tangible personal property. Such taxes shall not be included in these Contract prices as long as the State maintains such exemptions. Copies of all tax exemption certificates shall be supplied to Contractor, if requested.
- (c) **Out-of-Pocket Expenses**  
Contractor acknowledges that the out-of-pocket expenses that Contractor expects to incur in performing the Services/ providing the Deliverables (such as, but not limited to, travel and lodging, document reproduction and shipping, and long distance telephone) are included in Contractor's fixed price for each Statement of Work. Accordingly, Contractor's out-of-pocket expenses are not separately reimbursable by the State unless, on a case-by-case basis for unusual expenses, the State has agreed in advance and in writing to reimburse Contractor for such an expense at the State's current travel reimbursement rates. See [www.michigan.gov/dmb](http://www.michigan.gov/dmb) for current rates.
- (d) **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.
- (e) **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.



(f) 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 this 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 the Contract, other than those claims previously filed in writing on a timely basis and still unsettled.

**2.093 State Funding Obligation**

The State's obligation under this Contract is payable only and solely from funds appropriated for the purpose of this Contract. Contractor acknowledges and agrees that all funds for payments after the end of the current fiscal year are subject to the availability of a legislative appropriation for the purpose of this Contract. Events of non-appropriation are addressed further in **Section 2.210** of this Contract.

**2.094 Holdback – Deleted N/A**

**2.095 Electronic Payment Availability**

Public Act 533 of 2004 requires that payments under this Contract be processed by electronic funds transfer (EFT). Contractor is required to register to receive payments by EFT at the Contract & Payment Express website ([www.cpexpress.state.mi.us](http://www.cpexpress.state.mi.us)). Failure to register for EFT may result in disqualification of the Bidder.

2.100 Contract Management

**2.101 Contract Management Responsibility**

- (a) Contractor shall have overall responsibility for managing and successfully performing and completing the Services/Deliverables, subject to the overall direction and supervision of the State and with the participation and support of the State as specified in this Contract. Contractor's duties 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 Article 1, (Project Plan) is likely to delay the timely achievement of any Contract tasks.
- (b) The Services/Deliverables will be provided by the Contractor either 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.

**2.102 Problem and Contract Management Procedures**

Problem Management and Contract Management procedures will be governed by this Contract and the applicable Statements of Work.

**2.103 Reports and Meetings**

(a) Reports.

Within 30 days after the Effective Date, the parties shall determine an appropriate set of periodic reports to be issued by Contractor to the State. Such reports may include:

- (i) assess the Contractor's performance in each area of the Services;
- (ii) assess the degree to which the Contractor has attained or failed to attain the pertinent objectives for each area of the services, including on-time completion and delivery of Deliverables;
- (iii) explain the reasons for any failure to achieve on-time completion and delivery of Deliverables and include a plan for corrective action where appropriate;
- (iv) describe any circumstances that Contractor anticipates will impair or prevent on-time completion and delivery of Deliverables in upcoming reporting periods;
- (v) include plans for corrective action or risk mitigation where appropriate and describe the status of ongoing problem resolution efforts;
- (vi) provide reports setting forth a comparison of actual hours spent by Contractor (including its augmented personnel and Subcontractors) in performing the Project versus hours budgeted by Contractor.



- (vii) set forth a record of the material personnel changes that pertain to the Services and describe planned changes during the upcoming month that may affect the Services.
- (viii) include such documentation and other information may be mutually agreed to verify compliance with, and meeting the objectives of, this Contract.
- (ix) set forth an updated schedule that provides information on the status of upcoming Deliverables, expected dates of delivery (or redelivery) of such Deliverables and estimates on timing for completion of the Project.

(b) Meetings.

Within 30 days after the Effective Date, the parties shall determine an appropriate set of meetings to be held between representatives of the State and Contractor. Contractor shall prepare and circulate an agenda sufficiently in advance of each such meeting to give participants an opportunity to prepare for the meeting. Contractor shall incorporate into such agenda items that the State desires to discuss. At the State's request, Contractor shall prepare and circulate minutes after a meeting.

#### 2.104 System Changes

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

#### 2.105 Deleted N/A

#### 2.106 Change Requests

The State reserves the right to request from time to time, any changes to the requirements and specifications of this Contract and the work to be performed by the Contractor under this Contract. During the course of ordinary business, it may become necessary for the State to discontinue certain business practices or create Additional Services/Deliverables. At a minimum, to the extent applicable, 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, and a complete and detailed cost justification.

If the State requests or directs the Contractor to perform any Services/Deliverables that are outside the scope of the Contractor's responsibilities under this 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. If the Contractor fails to notify the State before commencing performance of the requested activities, any such activities performed before notice is given by the Contractor shall be conclusively considered to be in-scope Services/Deliverables, 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 this Contract, but which the Contractor reasonably and in good faith believes are not included within the Statements of Work, then before performing such services or providing such deliverables, the Contractor shall notify the State in writing that it considers the services or deliverables to be an Additional Service/Deliverable for which the Contractor should receive additional compensation. If the Contractor does not so notify the State, the Contractor shall have no right to claim thereafter that it is entitled to additional compensation for performing that service or providing that deliverable. If the Contractor does so notify the State, then such a service or deliverable shall be governed by the Change Request procedure in this Section.

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

#### Process for Change Requests:

- (i) State Requests  
If the State should require Contractor to perform New Work, Additional Services or make changes to the Services that would affect this Contract's 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").
- (ii) Contractor Recommendations  
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 this Contract.



- (iii) 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.
- (iv) By giving Contractor written notice within a reasonable time, the State shall be entitled to accept a Contractor proposal for Change, to reject it or to reach another agreement with Contractor. Should the parties agree on carrying out a Change, a written Contract Change Notice shall 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").
- (v) No proposed Change shall be performed until the proposed Change has been specified in a duly executed Contract Change Notice issued by the Department of Management and Budget, Purchasing Operations.
- (vi) If the State requests or directs Contractor to perform any activities that Contractor believes constitute a Change, Contractor must notify the State that it believes the requested activities are a Change prior to commencing the performance of the requested activities. If Contractor fails to so notify the State prior to commencing performance of the requested activities, such activities shall be considered to be performed gratuitously by Contractor, and Contractor shall not have any right thereafter to assert any claim for additional compensation or time for the performance of such activities. If Contractor commences performance of gratuitous services outside the scope of this Contract and subsequently elects to stop performing such out-of-scope services, Contractor must, at the request of the State, back out or reverse any changes resulting from such performance that would adversely affect this Contract.

### **2.107 Management Tools**

Contractor will use an automated tool for planning, monitoring and tracking this Contract's progress. In addition, Contractor shall use automated project management tools as reasonably necessary to perform the Services, which tools shall include the capability to produce through the end of this Contract: (i) staffing tables with names of personnel assigned to Contract tasks, (ii) 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 60 days, updated semi-monthly) and (iii) graphs showing critical events, dependencies and decision points during the course of this Contract. Any tool(s) used by Contractor for such purposes must produce information of a type and in a manner and format that will support reporting in compliance with the State's standard to the extent such information is described with reasonable detail in the Statements of Work and to the extent the related work is of sufficient project complexity and duration to warrant such reporting.

### 2.110 Records and Inspections

#### **2.111 Records and Inspections**

- (a) **Inspection of Work Performed.** The State's authorized representatives shall, at all reasonable times and with 10 business days prior written request, have the right to enter Contractor's premises, or any other places, where the Services are being performed, and shall have access, upon reasonable request, to interim drafts of Deliverables or work-in-progress. Upon 10 days prior written notice and at all reasonable times, the State's representatives shall be allowed to inspect, monitor, or otherwise evaluate the work being performed and to the extent that such 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.
- (b) **Examination of Records.** Contractor agrees that the State, including its duly authorized representatives, until the expiration of seven (7) years following the creation of the material (collectively, the "Audit Period"), shall, upon 20 days prior written notice, have access to and the right to examine and copy any of Contractor's books, records, documents, and papers pertinent to establishing Contractor's compliance with this Contract and with applicable laws and rules, including the State's procurement rules, regulations, and procedures, and actual performance of this Contract for the purpose of conducting an audit, examination, excerpt and/or transcription but the State shall not have access to any information deemed confidential to Contractor to the extent such access would require such 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 this Contract.

- (c) **Retention of Records.** Contractor shall maintain at least until the end of the Audit Period, all pertinent financial and accounting records (including time sheets and payroll records, and information pertaining to this Contract and to the Services, equipment, and commodities provided under this Contract) pertaining to this Contract in accordance with generally accepted accounting principles and other procedures specified in this Section. Financial and accounting records shall be made available, upon request, to the State at any time during the Audit Period. If an audit, litigation, or other action involving Contractor's records is initiated before the end of the Audit Period, the records 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.
- (d) **Audit Resolution.** If necessary, the Contractor and the State shall 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 such report, unless a shorter response time is specified in such report. The Contractor and the State shall develop, agree upon and monitor an action plan to promptly address and resolve any deficiencies, concerns, and/or recommendations in such audit report.

#### **2.112 Errors**

- (a) If the audit demonstrates any errors in the statements provided to the State, then the amount in error shall be reflected as a credit or debit on the next invoice and in subsequent invoices until the amount is paid or refunded in full. However, a credit or debit may not be carried for more than four (4) quarterly statements. If a balance remains after four (4) quarterly statements, then the remaining amount will be due as a payment or refund within 45 days of the last quarterly statement that the balance appeared on or termination of this contract, whichever is earlier.
- (b) In addition to other available remedies, the difference between the payment received and the correct payment amount is greater than 10%, then the Contractor shall pay all of the reasonable costs of the audit.

#### 2.120 State Responsibilities

#### **2.121 State Performance Obligations**

- (a) **Equipment and Other Resources.** To facilitate Contractor's performance of the Services/Deliverables, the State shall provide to Contractor such equipment and resources as identified in the Statements of Work or other Contract Exhibits as items to be provided by the State.
- (b) **Facilities.** The State shall designate space as long as it is available and as provided in the Statement of Work, to house Contractor's personnel whom the parties agree will perform the Services/Deliverables at State facilities (collectively, the "State Facilities"). Contractor shall have reasonable access to, and unless agreed otherwise by the parties in writing shall observe and comply with all rules and regulations relating to, each of the State Facilities (including hours of operation) used by 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 Contractor's use, or to which Contractor otherwise gains access in the course of performing the Services, for any purpose other than providing the Services to the State.
- (c) **Return.** Contractor shall be responsible for returning to the State any State-furnished equipment, facilities and other resources when no longer required for this Contract in the same condition as when provided by the State, reasonable wear and tear excepted.
- (d) Except as otherwise provided in **Section 2.220**, the State's failure to perform its responsibilities as set forth in this Contract shall not be deemed to be grounds for termination by Contractor. However, Contractor will not be liable for any default or delay in the performance of its obligations under this Contract to the extent such default or delay is caused by nonperformance of the State's obligations under this Contract, provided Contractor provides the State with reasonable written notice of such nonperformance and Contractor uses commercially reasonable efforts to perform notwithstanding the State's failure to perform. In addition, if the State's nonperformance of its responsibilities under this Contract materially increases the time required for Contractor's performance or Contractor's cost of performance, Contractor shall be entitled to seek an equitable extension via the Change Request process described in **Section 2.106**.



## 2.130 Security

### **2.131 Background Checks**

The Contractor shall authorize the investigation of its personnel proposed to have access to State facilities and systems on a case by case basis. 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. Such 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.

All Contractor personnel will also be expected to comply with the State's security and acceptable use policies for State IT equipment and resources. See [www.michigan.gov/dit](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.

### **2.132 PCI Data Security Requirements – Deleted N/A**

## 2.140 Deleted N/A

## 2.150 Confidentiality

### **2.151 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").

### **2.152 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 shall 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 shall mean any information which is retained in confidence by the State (or otherwise required to be held in confidence by the State pursuant to applicable federal, state and local laws and regulations) or which, in the case of tangible materials provided to Contractor by the State pursuant to its performance under this Contract, is marked as confidential, proprietary or with a similar designation by the State. In the case of information of either Contractor or the State "Confidential Information" shall exclude any information (including this Contract) that is publicly available pursuant to the Michigan FOIA.

### **2.153 Protection 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 in order 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) such disclosure is necessary or otherwise naturally occurs in connection with work that is within such Subcontractor's scope of responsibility, and (C) Contractor obligates the Subcontractor in a written Contract to maintain the State's Confidential Information in confidence. At the State's request, any employee of Contractor and of any Subcontractor having access or continued access to the State's Confidential Information may be required to execute an acknowledgment that the employee has been advised of Contractor's and the Subcontractor's obligations under this Section and of the employee's obligation to Contractor or Subcontractor, as the case may be, to protect such Confidential Information from unauthorized use or disclosure.

**2.154 Exclusions**

Notwithstanding the foregoing, the provisions of 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 such 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 such 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 such disclosure as reasonably requested by the furnishing party.

**2.155 No Implied Rights**

Nothing contained in this Section shall 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.

**2.156 Remedies**

Each party acknowledges that, if it breaches (or attempts or threatens to breach) its obligations under this Section, the other party may be irreparably harmed. Accordingly, if a court of competent jurisdiction should find that a party has breached (or attempted or threatened to breach) any such obligations, the non-breaching party shall be entitled to seek an injunction preventing such breach (or attempted or threatened breach).

**2.157 Security Breach Notification**

In the event of a breach of this Section, Contractor shall take (i) prompt corrective action to cure any such deficiencies and (ii) any action pertaining to such unauthorized disclosure required by applicable federal and state laws and regulations. Contractor and the State will cooperate to mitigate, to the extent practicable, the effects of any breach, intrusion, or unauthorized use or disclosure. Contractor shall report to the State in writing any use or disclosure of Confidential Information, whether suspected or actual, other than as provided for by this Contract within 10 days of becoming aware of such use or disclosure or such shorter time period as is reasonable under the circumstances.

**2.158 Survival**

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

**2.159 Destruction of Confidential Information**

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

**2.160 Proprietary Rights****2.161 Ownership**

All Deliverables shall be owned by the State and shall be considered works made for hire by the Contractor for the State. The State shall own all United States and international copyrights, trademarks, patents, or other proprietary rights in the Deliverables.

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

**2.162 Source Code Escrow – Deleted N/A**

**2.163 Rights in Data**

- (a) The State will be and remain the owner of all data made available by the State to Contractor or its agents, Subcontractors or representatives pursuant to this Contract. 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 Contractor, nor will any employee of 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, Contractor shall only use personally identifiable information as strictly necessary to provide the Services and shall disclose such information only to its employees who have a strict need to know such information. Contractor shall comply at all times with all laws and regulations applicable to such personally identifiable information.
- (b) The State is and shall remain the owner of all State-specific data pursuant to this 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 shall only use personally identifiable information as strictly necessary to utilize the Services and shall disclose such information only to its employees who have a strict need to know such information, except as provided by law. The State shall comply at all times with all laws and regulations applicable to such personally identifiable information. Other material developed and provided to the State shall remain the State's sole and exclusive property.

**2.164 Ownership of Materials**

State and Contractor will continue to own their respective proprietary technologies developed before entering into this 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.

**2.165 Standard Software**

If applicable and necessary, all Standard Software used in performing the Services shall be provided to the State under a separate license agreement between the State and the owner (or authorized licensor) of such software.

**2.166 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.

**2.167 General Skills**

Notwithstanding anything to the contrary in this Section, each party, its Subcontractors and their personnel shall be free to use and employ its and their general skills, know-how and expertise, and to use, disclose and employ any generalized ideas, concepts, know-how, methods, techniques or skills gained or learned during the course of performing the Services, so long as it or they acquire and apply the foregoing without disclosure of any confidential or proprietary information of the other party.

2.170 Warranties And Representations**2.171 Warranties and Representations**

The Contractor represents and warrants:

- (a) It is capable in all respects of fulfilling and shall fulfill all of its obligations under this Contract. The performance of all obligations under this Contract shall be provided in a timely, professional, and workman-like manner and shall meet the performance and operational standards required under this Contract.
- (b) This Contract signatory has the power and authority, including any necessary corporate authorizations, necessary to enter into this Contract, on behalf of Contractor.
- (c) It is qualified and registered to transact business in all locations where required.



- (d) Neither the Contractor nor any Affiliates, nor any employee of either, has, shall have, or shall 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 shall notify the State within two (2) days of any such interest that may be incompatible with the interests of the State.
- (e) Neither Contractor nor any Affiliates, nor any employee of either has accepted or shall 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 shall not attempt to influence any State employee by the direct or indirect offer of anything of value.
- (f) 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 such Affiliate, any fee, commission, percentage, brokerage fee, gift, or any other consideration, contingent upon or resulting from the award or making of this Contract.
- (g) 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.
- (h) All financial statements, reports, and other information furnished by Contractor to the State 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 such financial statements, reports, other information. Since the respective dates or periods covered by such financial statements, reports, or other information, there have been no material adverse change in the business, properties, financial condition, or results of operations of Contractor.
- (i) All written information furnished to the State by or behalf of Contractor in connection with this Contract, including its bid, is true, accurate, and complete, and contains no untrue statement of material fact or omits any material fact necessary to make such information not misleading.
- (j) 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 such department within the previous five (5) years for the reason that Contractor failed to perform or otherwise breached an obligation of such contract.

## 2.172 Software Warranties

### (a) 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 this Contract) for a period of 90 days. In the event of a breach of this warranty, Contractor will correct the affected Deliverable(s) at no charge to the State, by direction of the CCI.

### (b) No Surreptitious Code Warranty

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

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

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



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

(c) Calendar Warranty

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

The software design, to insure calendar year rollover compatibility, shall include, but is not limited to: data structures (databases, data files, etc.) that provide four (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 four (4)-digit years; and assurance that the year 2000 shall be correctly treated as a leap year within all calculation and calendar logic.

(d) 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.

### **2.173 Equipment Warranty**

To the extent Contractor is responsible under this Contract for maintaining equipment/system(s), Contractor represents and warrants that it will maintain such equipment/system(s) in good operating condition and will undertake all repairs and preventive maintenance in accordance with the applicable manufacturer's recommendations for the period specified in this Contract.

The Contractor represents and warrants that the equipment/system(s) shall be in good operating condition and shall operate and perform to the requirements and other standards of performance contained in this Contract, when installed, at the time of Final Acceptance by the State, and for a period of one (1) year commencing upon the first day following Final Acceptance.

Within five (5) business days of notification from the State, the Contractor shall adjust, repair or replace all equipment that is defective or not performing in compliance with this Contract. The Contractor shall assume all costs for replacing parts or units and their installation including transportation and delivery fees, if any.

The Contractor shall provide a toll-free telephone number to allow the State to report equipment failures and problems to be remedied by the Contractor.

The Contractor agrees that all warranty service it provides under this Contract shall be performed by original equipment manufacturer (OEM) trained, certified and authorized technicians.

The Contractor shall act as the sole point of contact for warranty service. The Contractor warrants that it shall pass through to the State any and all warranties obtained or available from the original equipment manufacturer, including any replacement, upgraded, or additional equipment warranties.

All warranty work shall be performed on the State of Michigan worksite(s) unless otherwise agreed to by the Contract Compliance Inspector.

**2.174 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 days after that date of Final Acceptance of the Software by the State. This warranty does not apply to defects arising from acts of Excusable Failure. If the Contractor breaches this warranty, then the State shall be entitled to replacement of the non-compliant copy by Contractor, at Contractor's expense (including shipping and handling).

**2.175 Standard Warranties**

- a) **Warranty of Merchantability**  
Deliverables shall be merchantable. All Deliverables shall be of good quality within the description given by the State, shall be fit for their ordinary purpose, shall be adequately contained and packaged within the description given by the State, shall conform to the agreed upon specifications, and shall conform to the affirmations of fact made by the Contractor on the container or label.
- (b) **Warranty of fitness for a particular purpose**  
When Contractor has reason to know or knows any particular purpose for which the Deliverables are required, and when the State is relying on the Contractor's skill or judgment to select or furnish suitable Deliverables, the Contractor warrants that the Deliverables are fit for such purpose.
- (c) **Warranty of title**  
Contractor shall convey good title in those Deliverables, whose transfer is right and lawful. All Deliverables provided by Contractor shall be delivered free from any security interest, lien, or encumbrance. Deliverables shall be delivered free of any rightful claim of any third person of ownership, interest, lien or encumbrance

**2.176 Consequences For Breach**

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

2.180 Insurance**2.181 Liability Insurance**

- (a) **Liability Insurance**  
The Contractor is required to provide proof of the minimum levels of insurance coverage as indicated below. The purpose of this coverage shall be to protect the State from claims which may arise out of or result from the Contractor's performance of services under the terms of this Contract, whether such services are performed by the Contractor, or by any subcontractor, or by anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable.

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

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

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

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



Before this Contract is signed by both parties or before the purchase order is issued by the State, the Contractor must furnish to the Director of Purchasing Operations, certificate(s) of insurance verifying insurance coverage ("Certificates"). The Certificate must be on the standard "accord" form or equivalent. **THIS CONTRACT OR PURCHASE ORDER NO. 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) shall contain a provision indicating that coverages 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 this Contract or Purchase Order number affected and be mailed to: Director, Purchasing Operations, Department of Management and Budget, P.O. Box 30026, Lansing, Michigan 48909. Failure to provide evidence of coverage, may, at the State's sole option, result in this Contract's termination.

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  
 \$500,000 Fire Damage Limit (any one fire)

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 in accordance with applicable laws governing the employees and employers work activities in the state of the Contractor's domicile. If the applicable coverage is provided by a self-insurer, 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 shall 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 \$1,000,000.00 with a maximum deductible of \$50,000.00.



- (b) **Subcontractors**  
Except where the State has approved in writing a Contractor subcontract with other insurance provisions, Contractor shall 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) shall 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.
- (c) **Certificates of Insurance and Other Requirements**  
Contractor shall furnish to Purchasing Operations certificate(s) of insurance verifying insurance coverage or providing satisfactory evidence of self-insurance as required in this Section (the "Certificates"). Before this Contract is signed, and not less than 20 days before the insurance expiration date every year thereafter, the Contractor shall provide evidence that the State and its agents, officers and employees are listed as additional insureds 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.

Contractor shall maintain all required insurance coverage throughout the term of this Contract and any extensions thereto and, in the case of claims-made Commercial General Liability policies, shall secure tail coverage for at least three (3) years following the expiration or termination for any reason of this Contract. The minimum limits of coverage specified above are not intended, and shall not be construed, to limit any liability or indemnity of Contractor under this Contract to any indemnified party or other persons. Contractor shall be responsible for all deductibles with regard to such insurance. If 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, at the State's election (but without any obligation to do so) after the State has given Contractor at least 30 days written notice, the State may pay such premium or procure similar insurance coverage from another company or companies; and at the State's election, the State may deduct the entire cost (or part thereof) from any payment due Contractor, or Contractor shall pay the entire cost (or any part thereof) upon demand by the State.

#### 2.190 Indemnification

#### **2.191 Indemnification**

- (a) **General Indemnification**  
To the extent permitted by law, the Contractor shall 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.
- (b) **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.
- (c) **Employee Indemnification**  
In any and all 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 this Contract shall 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.



(d) Patent/Copyright Infringement Indemnification

To the extent permitted by law, the Contractor shall 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 such 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 such equipment, software, commodity or service, or the use or reproduction of any documentation provided with such 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 shall at the Contractor's sole expense (i) procure for the State the right to continue using the equipment, software, commodity or service or, if such 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 such 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 shall have 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; or (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.

### 2.192 Continuation of Indemnification Obligations

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

### 2.193 Indemnification Procedures

The procedures set forth below shall apply to all indemnity obligations under this Contract:

- (a) After receipt by the State of notice of the action or proceeding involving a claim in respect of which it will seek indemnification, the State shall promptly notify Contractor of such 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 Contractor shall relieve Contractor of its indemnification obligations except to the extent that Contractor can demonstrate damages attributable to such failure. Within 10 days following receipt of written notice from the State relating to any claim, Contractor shall 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 prior to the State receiving Contractor's Notice of Election, the State shall be entitled to defend against the claim, at Contractor's expense, and Contractor will be responsible for any reasonable costs incurred by the State in defending against the claim during such period.
- (b) If Contractor delivers a Notice of Election relating to any claim: (i) the State shall be entitled to participate in the defense of such claim and to employ counsel at its own expense to assist in the handling of such claim and to monitor and advise the State about the status and progress of the defense; (ii) Contractor shall, at the request of the State, demonstrate to the reasonable satisfaction of the State, Contractor's financial ability to carry out its defense and indemnity obligations under this Contract; (iii) Contractor shall periodically advise the State about the status and progress of the defense and shall obtain the prior written approval of the State before entering into any settlement of such claim or ceasing to defend against such claim and (iv) to the extent that any principles of Michigan governmental or public law may be involved or challenged, the State shall have the right, at its own expense, to control the defense of that portion of such claim involving the principles of Michigan governmental or public law. Notwithstanding the foregoing, the State may retain control of the defense and settlement of a claim by written notice to Contractor given within 10 days after the State's receipt of Contractor's information requested by the State pursuant to clause (ii) of this paragraph if the State determines that Contractor has failed to demonstrate to the reasonable satisfaction of the State Contractor's financial ability to carry out its defense and indemnity obligations under this Section.



Any litigation activity on behalf of the State of Michigan, or any of its subdivisions pursuant to this Section, must be coordinated with the Department of Attorney General. In the event the insurer's attorney represents the State pursuant to 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 shall have the right to defend the claim in such 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 shall promptly reimburse the State for all such reasonable costs and expenses.

## 2.200 Limits of Liability and Excusable Failure

### **2.201 Limits of Liability – Deleted N/A**

### **2.202 Excusable Failure**

Neither party will be liable for any default, damage or delay in the performance of its obligations under this Contract to the extent such 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 such party; provided the non-performing party and its Subcontractors are without fault in causing such default or delay, and such 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.

In such event, the non-performing party will be excused from any further performance or observance of the obligation(s) so affected for as long as such circumstances prevail and such party continues to use its commercially reasonable efforts to recommence performance or observance whenever and to whatever extent possible without delay and provided further that such party promptly notifies the other party in writing of the inception of the excusable failure occurrence, and also of its abatement or cessation.

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

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 this 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.

### **2.203 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 manmade disaster.



## 2.210 Termination/Cancellation by the State

The State may terminate this Contract without further liability or penalty to the State, its departments, divisions, agencies, offices, commissions, officers, agents and employees for any of the following reasons:

### **2.211 Termination for Cause**

- (a) In the event that Contractor breaches any of its material duties or obligations under this Contract (including a Chronic Failure to meet any particular SLA as defined in **Section 2.076**), which are either not capable of or subject to being cured, or are not cured within the time period specified in the written notice of breach provided by the State (such time period not to be less than 30 days), or pose a serious and imminent threat to the health and safety of any person, or the imminent loss, damage or destruction of any real or tangible personal property, the State may, having provided written notice of termination to Contractor, terminate this Contract in whole or in part, for cause, as of the date specified in the notice of termination.
- (b) In the event that this Contract is terminated for cause, in addition to any legal remedies otherwise available to the State by law or equity, Contractor shall be responsible for all costs incurred by the State in terminating this Contract, including but not limited to, State administrative costs, reasonable attorneys' fees and court costs, and any reasonable additional costs the State may incur to procure the Services/Deliverables required by this Contract from other sources. Re-procurement costs shall not be considered by the parties to be consequential, indirect or incidental damages, and shall not be excluded by any other terms otherwise included in this Contract, provided such costs are not in excess of 50% more than the prices for such Service/Deliverables provided under this Contract.
- (c) In the event 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 shall pay for all Services/Deliverables for which Final Acceptance has been granted provided up to the termination date. Services and related provisions of this Contract that are terminated for cause shall cease on the effective date of the termination.
- (d) In the event this Contract is terminated for cause pursuant to this Section, and it is determined, for any reason, that Contractor was not in breach of this Contract pursuant to the provisions of this section, that termination for cause shall be deemed to have been a termination for convenience, effective as of the same date, and the rights and obligations of the parties shall be limited to that otherwise provided in this Contract for a termination for convenience.

### **2.212 Termination for Convenience**

The State may terminate this Contract for its convenience, in whole or part, if the State determines that such a termination is in the State's best interest. Reasons for such termination shall 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 this 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 prior to the date of termination. If the State chooses to terminate this Contract in part, the charges payable under this Contract shall be equitably adjusted to reflect those Services/Deliverables that are terminated. Services and related provisions of this Contract that are terminated for cause shall cease on the effective date of the termination.

### **2.213 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 shall have the right to 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 shall give Contractor at least 30 days advance written notice of termination for non-appropriation or unavailability (or such 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 this 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 made available, the State may, upon 30 days written notice to Contractor, reduce the level of the Services or the change the production of Deliverables in such manner and for such 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 such reduction.
- (c) In the event the State terminates this Contract, eliminates certain Deliverables, or reduces the level of Services to be provided by Contractor pursuant to this Section, the State shall 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. For the avoidance of doubt, this Section will not preclude Contractor from reducing or stopping Services/Deliverables and/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.

#### **2.214 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 incident to the application for, or performance of, a State, public or private Contract or subcontract; convicted of a criminal offense, including any of the following: embezzlement, theft, forgery, bribery, falsification or destruction of records, receiving stolen property, attempting to influence a public employee to breach the ethical conduct standards for State of Michigan employees; convicted under State or federal antitrust statutes; or convicted of any other criminal offense which in the sole discretion of the State reflects upon Contractor's business integrity.

#### **2.215 Approvals Rescinded**

The State may terminate this Contract without further liability or penalty in the event any final administrative or judicial decision or adjudication disapproves a previously approved request for purchase of personal services pursuant to Constitution 1963, Article 11, § 5, and Civil Service Rule 7-1. 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 such written notice.

#### **2.216 Rights and Obligations Upon Termination**

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



### 2.217 Reservation of Rights

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

### 2.218 Contractor Transition Responsibilities

In the event this Contract is terminated, for convenience or cause, dissolved, voided, rescinded, nullified, expires or is otherwise rendered unenforceable, the Contractor agrees to comply with direction provided by the State to assist in the orderly transition of equipment, services, software, leases, etc. to the State or a third party designated by the State. In the event of termination or the expiration of this Contract, 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 180 days. These efforts shall include, but are not limited to, the following:

(a) Personnel

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 shall allow as many personnel as practicable to remain on the job to help the State, or a specified third party, maintain the continuity and consistency of the services required by this Contract. In addition, during or following the transition period, in the event the State requires the Services of the Contractor's subcontractors or Contractors, 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 Contractors. Contractor will notify all of Contractor's subcontractors of procedures to be followed during transition.

(b) Information

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

(c) Software

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

(d) Payment

If the transition results from a termination for any reason, reimbursement shall be governed by the termination provisions of this Contract. If the transition results from expiration, the Contractor will be reimbursed for all reasonable transition costs (i.e. costs incurred within the agreed period after Contract expiration that result from transition operations). The Contractor will prepare an accurate accounting from which the State and Contractor may reconcile all outstanding accounts.

### 2.219 State Transition Responsibilities

In the event that this Contract is terminated, dissolved, voided, rescinded, nullified, or otherwise rendered unenforceable, the State agrees to perform the following obligations, and any others 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.

### 2.220 Termination by Contractor

#### 2.221 Termination by Contractor

If the State materially breaches its obligation to pay Contractor undisputed amounts due and owing under this Contract in accordance with **Section 2.090**, or if the State breaches its other obligations under this Contract to an extent that makes it impossible or commercially impractical for Contractor to perform the Services, and if the State does not cure the breach within the time period specified in a written notice of breach provided to the State by Contractor (such time period not to be less than 30 days), then Contractor may terminate this Contract, in whole or in part based on Statement of Work for cause, as of the date specified in the notice of termination; provided, however, that Contractor must discharge its obligations under **Section 2.250** before any such termination.

2.230 Stop Work**2.231 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 this 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 shall be specifically identified as such and shall indicate that it is issued under this **Section 2.230**. Upon receipt of the stop work order, Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of 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 shall either: (a) cancel the stop work order; or (b) terminate the work covered by the stop work order as provided in **Section 2.210**.

**2.232 Cancellation or Expiration of Stop Work Order**

If a stop work order issued under this **Section 2.230** is canceled or the period of the stop work order or any extension thereof expires, Contractor shall resume work. The parties shall agree upon an equitable adjustment in the delivery schedule, these Contract price(s), or both, and this Contract shall be modified, in writing, accordingly, if: (a) the stop work order results in an increase in the time required for, or in Contractor's costs properly allocable to, the performance of any part of this 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 this Contract. Any adjustment will conform to the requirements of **Section 2.106**.

**2.233 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, such termination shall be deemed to be a termination for convenience under **Section 2.212**, and the State shall allow reasonable costs resulting from the stop work order in arriving at the termination settlement. For the avoidance of doubt, the State shall not be liable to Contractor for loss of profits because of a stop work order issued under this **Section 2.230**.

2.240 Deleted N/A2.250 Dispute Resolution**2.251 In General**

Any claim, counterclaim, or dispute between the State and Contractor arising out of or relating to this Contract or any Statement of Work shall be resolved as follows. For all Contractor claims seeking an increase in the amounts payable to Contractor under this Contract, or the time for Contractor's performance, Contractor shall submit a letter executed by Contractor's Contract Administrator or his 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 supporting data provided with such an affidavit are current and complete to Contractor's best knowledge and belief.

**2.252 Informal Dispute Resolution**

- (a) All operational disputes between the parties shall be resolved under this Contract Management procedures developed pursuant to **Section 2.100**. If the parties are unable to resolve any disputes after compliance with such processes, the parties shall meet with the Director of Purchasing Operations, DMB, or designee, for the purpose of attempting to resolve such dispute without the need for formal legal proceedings, as follows:
- (i) The representatives of Contractor and the State shall meet as often as the parties reasonably deem necessary in order 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 shall discuss the problem and negotiate in good faith in an effort to resolve the dispute without the necessity of any formal proceeding.
  - (ii) During the course of negotiations, all reasonable requests made by one party to another for non-privileged information reasonably related to this Contract will be honored in order that each of the parties may be fully advised of the other's position.



- (iii) 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.
- (iv) Following the completion of this process within 60 calendar days, the Director of Purchasing Operations, DMB, or designee, shall issue a written opinion regarding the issue(s) in dispute within 30 calendar days. The opinion regarding the dispute shall be considered the State's final action and the exhaustion of administrative remedies.
- (b) This **Section 2.250** will not be construed to prevent either party from instituting, and a party is authorized to institute, formal proceedings earlier to avoid the expiration of any applicable limitations period, to preserve a superior position with respect to other creditors, or pursuant to **Section 2.253**.
- (c) The State will not mediate disputes between the Contractor and any other entity, except state agencies, concerning responsibility for performance of work pursuant to this Contract.

### **2.253 Injunctive Relief**

The only circumstance in which disputes between the State and Contractor will not be subject to the provisions of **Section 2.252** is where a party makes a good faith determination that a breach of the terms of this Contract by the other party is such that the damages to such 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.

### **2.254 Continued Performance**

Each party agrees to continue performing its obligations under this Contract while a dispute is being resolved except to the extent the issue in dispute precludes performance (dispute over payment shall not be deemed to preclude performance) and without limiting either party's right to terminate this Contract as provided in **Section 2.210** and **2.220**, as the case may be.

## 2.260 Federal and State Contract Requirements

### **2.261 Nondiscrimination**

In the performance of this 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, 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 pursuant to 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 this Contract.

### **2.262 Unfair Labor Practices**

Pursuant to 1980 PA 278, MCL 423.231, *et seq.*, the State shall not award a Contract or subcontract to an employer whose name appears in the current register of employers failing to correct an unfair labor practice compiled pursuant to 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 this Contract, shall not enter into a Contract with a Subcontractor, manufacturer, or supplier whose name appears in this register. Pursuant to section 4 of 1980 PA 278, MCL 423.324, the State may void any Contract if, subsequent to award of this Contract, the name of Contractor as an employer or the name of the Subcontractor, manufacturer or supplier of Contractor appears in the register.

### **2.263 Workplace Safety and Discriminatory Harassment**

In performing Services for the State, the Contractor shall comply with the Department of Civil Services Rule 2-20 regarding Workplace Safety and Rule 1-8.3 regarding Discriminatory Harassment. In addition, the Contractor shall comply with Civil Service regulations and any applicable agency rules provided to the Contractor. For Civil Service Rules, see [www.michigan.gov/mdcs](http://www.michigan.gov/mdcs).

2.270 Litigation**2.271 Disclosure of Litigation**

## (a) Disclosure.

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 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 this Contract and extensions thereto, to which Contractor (or, to the extent Contractor is aware, any Subcontractor hereunder) is a party, and which involves: (i) disputes that might reasonably be expected to adversely affect the viability or financial stability of Contractor or any Subcontractor hereunder; or (ii) a claim or written allegation of fraud against Contractor or, to the extent Contractor is aware, any Subcontractor hereunder by a governmental or public entity arising out of their business dealings with governmental or public entities. Any such litigation, investigation, arbitration or other proceeding (collectively, "Proceeding") must be disclosed in a written statement to this Contract Administrator within 30 days of its occurrence. Details of settlements which are prevented from disclosure by the terms of the settlement may be annotated as such. 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.

## (b) Assurances.

In the event that any such Proceeding disclosed to the State pursuant to 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:

- (i) the ability of Contractor (or a Subcontractor hereunder) to continue to perform this Contract in accordance with its terms and conditions, or
- (ii) whether Contractor (or a Subcontractor hereunder) in performing Services for the State is engaged in conduct which is similar in nature to conduct alleged in such Proceeding, which conduct would constitute a breach of this Contract or a violation of Michigan law, regulations or public policy, then Contractor shall be required to provide the State all reasonable assurances requested by the State to demonstrate that:
  - (A) Contractor and/or its Subcontractors hereunder will be able to continue to perform this Contract and any Statements of Work in accordance with its terms and conditions, and
  - (B) Contractor and/or its Subcontractors hereunder have not and will not engage in conduct in performing the Services which is similar in nature to the conduct alleged in such Proceeding.

## (c) Notifications.

Contractor shall make the following notifications in writing:

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

**2.272 Governing Law**

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

**2.273 Compliance with Laws**

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

**2.274 Jurisdiction**

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

2.280 Environmental Provision**2.281 Environmental Provision – Deleted N/A**2.290 General**2.291 Amendments**

This Contract may not be modified, amended, extended, or augmented, except by a writing executed by the parties.

**2.292 Assignment**

- (a) Neither party shall have the right to assign this Contract, or to assign or delegate any of its duties or obligations under this 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 this Contract to any other State agency, department, division or department without the prior consent of Contractor and Contractor may assign this Contract to an affiliate so long as such affiliate is adequately capitalized and can provide adequate assurances that such affiliate can perform this Contract. Any purported assignment in violation of this Section shall be null and void. It is the policy of the State of Michigan to withhold consent from proposed assignments, subcontracts, or novations when such transfer of responsibility would operate to decrease the State's likelihood of receiving performance on this Contract or the State's ability to recover damages.
- (b) Contractor may not, without the prior written approval of the State, assign its right to receive payments due under this Contract. In the event of any such permitted assignment, Contractor shall not be relieved of its responsibility to perform any duty imposed upon it herein, and the requirement under this Contract that all payments shall be made to one entity shall continue.

**2.293 Entire Contract; Order of Precedence**

- (a) This Contract, including any Statements of Work and Exhibits, to the extent not contrary to this Contract, each of which is incorporated for all purposes, constitutes the entire agreement between the parties with respect to the subject matter and supercedes all prior agreements, whether written or oral, with respect to such subject matter and as additional terms and conditions on the purchase order shall apply as limited by **Section 2.061**.
- (b) In the event of any inconsistency between the terms of this 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 **Sections 2.110 through 2.220** of this Contract, which may be modified or amended only by a formal Contract amendment.

**2.294 Headings**

Captions and headings used in this 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 this Contract.

**2.295 Relationship of the Parties (Independent Contractor Relationship)**

The relationship between the State and Contractor is that of client and independent Contractor. No agent, employee, or servant of Contractor or any of its Subcontractors shall be or shall 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 this Contract.

**2.296 Notices**

- (a) Notifications
- Any notice given to a party under this Contract shall be deemed effective, if addressed to such 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 (3rd) 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 of Michigan  
Purchasing Operations  
Attention: Lance Kingsbury  
PO Box 30026  
530 West Allegan  
Lansing, Michigan 48909

With a copy to:  
State of Michigan  
Office of Educational Assessment & Accountability  
Department of Education  
Attn: Joseph Martineau  
P.O. Box 30008  
Lansing, MI 48909

Contractor:  
Henry H. Scherich, Ph.D., President  
Measurement Incorporated  
423 Morris St  
Durham, NC 27701

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

- (b) Binding Commitments  
Representatives of Contractor named above shall have the authority to make binding commitments on Contractor's behalf within the bounds set forth in such table. Contractor may change such representatives from time to time upon written notice.

### **2.297 Media Releases and Contract Distribution**

#### **(a) Media Releases**

Neither Contractor nor the State will make any news releases, public announcements or public disclosures, nor will they have any conversations with representatives of the news media, pertaining to this Contract, the Services or this Contract without the prior written approval of the other party, and then only according to explicit written instructions provided by that party. In addition, neither Contractor nor the State will use the name, trademarks or other proprietary identifying symbol of the other party or its affiliates without the party's prior written consent. Prior written consent of the Contractor must be obtained from authorized representatives.

#### **(b) Contract Distribution**

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

### **2.298 Reformation and Severability**

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

### **2.299 Consents and Approvals**

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

### **2.300 No Waiver of Default**

The failure of a party to insist upon strict adherence to any term of this Contract shall not be considered a waiver or deprive the party of the right thereafter to insist upon strict adherence to that term, or any other term, of this Contract.

### **2.301 Survival**

Any provisions of this Contract that impose continuing obligations on the parties including the parties' respective warranty, indemnity and confidentiality obligations, shall survive the expiration or termination of this Contract for any reason. Specific references to survival in this Contract are solely for identification purposes and not meant to limit or prevent the survival of any other section.

### **2.302 Covenant of Good Faith**

Each party agrees that, in its dealings with the other party or in connection with this Contract, it shall act reasonably and in good faith. Unless stated otherwise in this 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 this Contract.

**2.303 Permits**

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

**2.304 Website Incorporation**

State expressly states that it will not be 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 such content and has expressly agreed to be bound by it in a writing that has been manually signed by an authorized representation of the State.

**2.305 Taxes**

Contractors shall collect and pay all applicable federal, state, and local employment taxes.

**2.306 Prevailing Wages – Deleted N/A****2.307 Call Center Disclosure**

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

**2.308 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 Contractor offering free assistance) to gain a leading edge on the competitive RFP.

2.310 Deleted N/A

2.320 Extended Purchasing

**2.321 MiDEAL - Deleted N/A****2.322 State Employee Purchases – Deleted N/A**



### Appendix A: General Material Specifications

Each Michigan-Developed booklet should be printed in black ink on white paper, such that the items on one page do not interfere with those printed on the reverse side. The front cover of each assessment booklet shall also be white paper, but the cover should be printed in monochrome in an ink color unique to the Michigan-developed portion of the MME assessment – different than the color(s) used for the college-entrance and work skills components. Each version of the Michigan-developed assessment booklet (initial, accommodation, make-up, and emergency) should also have a unique color on the cover. Answer documents should also contain printing in the same color of ink as the initial assessment booklets that make the connection between answer documents and the corresponding booklets obvious.

The total number of content areas and assessment forms developed per Contract year is dependent on which college-entrance and work skills assessments are selected. The following model is based on the ACT and ACT WorkKeys.

Based on the use of the ACT and ACT WorkKeys, the total number of Michigan-Developed test booklet forms developed per Contract year will be 13. The Michigan-developed MME test booklets will consist of the multiple-choice and constructed-response items. Each assessment will be timed. Each assessment booklet will be separated into one (1) section each for mathematics, science and social studies to allow for breaks in assessment. An outside seal will enclose all sections of the assessment booklet and an inner seal will hold fast the individual sections. The matrixed and field test items will be embedded within their content area. The position of matrixed items and field test items may change from assessment cycle to assessment cycle, but must remain constant within an assessment cycle. All answers are marked in machine-scannable answer documents. The separation may be done by providing separate sections on the answer documents for each content area of the assessment.

1. Overall Quality: All documents must be of typeset quality. All graphics must meet professional commercial standards. The quality of the materials (i.e., paper, ink) used to produce all documents must meet with the CCI's approval.
2. Printing and Approval Process: For the Michigan-developed assessments, all printed documents must undergo the following steps:
  - a. The MDE Development Contractor (separate Contract) prepares the print optimized camera-ready versions of the regular non-scannable materials.
  - b. MDE reviews and passes these along to the MME Michigan-developed component Administration Contractor.
  - c. The Administration Contractor develops page proofs of all materials. Electronic proofs are confidentially submitted to the CCI.
  - d. The CCI has three (3) business days to review page proofs. The CCI returns an electronic copy of the proofs to the Administration Contractor with corrections marked, as needed.
  - e. Steps c and d are repeated until the CCI gives written approval of page proofs.
  - f. The Administration Contractor produces blueline proofs. Electronic blueline proofs are submitted to the CCI.
  - g. The CCI reviews blueline proofs. The CCI returns an electronic copy of the blueline proofs to the Administration Contractor with corrections marked, as needed.
  - h. Steps f and g are repeated until the CCI gives written approval to print.
  - i. The Administration Contractor shall prepare the print optimized camera-ready versions of the accommodation materials and follow steps c through h.
  - j. Administration Contractor prints materials to the quantities approved by the CCI.
  - k. Seven (7) sets of each regular print test booklet and reader script; one (1) set of each accommodation material; and 20 sets of each answer document, administration manual and header sheet template shall be provided to MDE after the printing of each begins and before materials begin to ship to schools.
3. Assessment Booklets: All assessment booklet formats (including paper, braille, reader scripts, audio and video versions) are secure documents that must be returned by the school district to the Contractor after the assessment is finished.

All assessment booklets will be printed, to result in, two (2) sided on 8.5" x 11" sheets of 30# white paper stock offset with color cover ink (black and blue PMS 1234 [or red PMS #####, etc]) and black inside ink. The weight of the paper stock can be changed as long as the opacity does not allow for the reading of text from the opposite side of the paper. Bidders must provide a sample of the paper stock they intend to use along with their proposal.

The Development Contractor or the CCI will provide a camera-ready copy of all assessment booklets to the Administration Contractor.



4. Answer Document:
  - a. There will be one (1) Answer Document for the Michigan-developed portion of the MME. Top right corner clip on all documents.
  - b. As referenced in this Contract, the CCI must propose a mechanism to ensure that all pages of an Answer Document stay linked when the booklet is physically separated to facilitate scoring. This includes pages containing student identification information, multiple-choice items, and constructed-response items. The CCI must approve the Administration Contractor's method of carrying out this requirement.
  - c. Item numbering and spacing in each Answer Document shall match the item numbering and page breaks in the corresponding assessment booklet.
  - d. Answer documents shall be printed resulting in machine-scannable two (2) sided bound 8.5" x 11" white paper, with black and monochrome (to match the cover color of the initial assessment booklet) ink color (black and Scan Blue 123 [or scan red ###, etcetera).
  
5. Enlarged Print Versions of Materials:
  - a. Materials are to be magnified to a 35% increase over original.
  - b. Test booklet documents originally printed on 8½ " x 11" paper will be printed on 11" x 15" paper for enlarged print.
  - c. Paper (type and stock) used for large print versions of materials shall be equivalent to that used in the regular version.
  - d. Non-glossy (matte) paper must be used.
  - e. The darkest possible print setting that will not turn the paper gray must be used.
  
6. Braille Versions of Materials:
  - a. Assessments are to be brailled and proofread by a certified braille transcriber. The American Printing House for the Blind, Louisville, KY, is the preferred Vendor for the Braille testing materials.
  - b. The brailler shall follow formats in the publication entitled *Standardized Tests*, published by the National Braille Association. Nemeth Code Text should be followed for mathematics and science. Textbook Code (Literary Code) should be followed for ELA (reading, writing) and social studies.
  
7. English Language Learner Accommodation materials:
  - a. An English reader script must be created for each test booklet (include the college-entrance and work skills) by the respective Contractor. The reader scripts should cover all content areas except English reading sections of the test.
  - b. The English reader script is then provided to translators that have mastery in the target language, English, and the content area as well as grade level of the areas being translated. Target languages are Spanish and Arabic.
  - c. The translators create readers scripts in the target languages.
  - d. The target language reader scripts must then be reviewed by an independent third party for accuracy and natural language flow.
  - e. Once the reader scripts are determined to be accurate they are used to make video masters.
  - f. Video masters are created by using visual images of English text from actual test materials with an audio of the target language.
  - g. When done, there should be at least three (3) sets of video masters for each test or section - each with different audio (English, Spanish and Arabic).
  
8. Audiotape, Videotape, and DVD Versions of Assessments:
  - a. All media must be labeled with program name (MME), language version, accommodation type (e.g. ELL or Visually Impaired), content area, and date of assessment (e.g. Spring 2009). The label must also state "Any copying is strictly prohibited. All rights under copyright reserved. TM, ®, and Copyright © by the Michigan Department of Education. All rights reserved." These labels shall be approved by the CCI. Only the college-entrance and work skills media may also include other proprietary language.
  - b. The labels for DVDs must also state "Audio Only Version" Or "Video Version" plus the media type of DVD.
  - c. Each content area shall have a separate audio/video unit (DVD, VHS, Audiotape). Do not combine all content areas into one (1) video/audio unit.
  - d. Individual audio/video units must be wrapped with the complimenting content areas' audio/video units (e.g., so that one (1) unit for each content area is included), one (1) corresponding assessment booklet plus any related ancillary materials (e.g. acetate ruler) for distribution to school districts. An example of what one (1) package would contain for a Spanish accommodation is: one (1) Spanish mathematics video DVD, One (1) Spanish science video DVD, One (1) Spanish social studies video DVD, one (1) regular form #1 test booklet, and one (1) acetate ruler.



- e. The DVDs should be sectioned so as to permit students to re-listen to a passage, a question, or the responses to the question without listening to the entire section again.
- f. The same program shall be recorded on both sides of each audiotape.
- g. Additional requirements are in section 1.104.D.

9. Assessment Administration Manuals and Assessment Coordinator manuals:

- a. All manuals shall be printed in saddle-stitched booklets with 8.5" x 11" cover stock 50# buff offset, inside stock 30# white offset with black ink on both sides. The weight of the paper stock can be changed as long as the opacity does not allow for the reading of text from the opposite side of the paper.

10. Student Labels

- a. Refer to Section 1.104.I.

11. Material Quantities

All Michigan-Developed MME materials will comply with the general materials specifications of this Appendix. The following tables describe an estimate of the deliverable products required for each of the three (3) years of this Contract. Actual materials and their quantities shall be approved by the CCI in writing before production of each item begins.

- 1. This table covers test design and materials that are needed for the Michigan-developed components of the MME. All subjects should be combined into one (1) test booklet with security tabs for each section plus one (1) for the booklet. There will be three (3) categories of items used in each test booklet; common operation, matrixed operational, and embedded field-test items. Common operational items are items that are the same in each form of the test booklet. Matrixed operational items are different on each form. Embedded field-test items are try-out items that might appear on future tests. MC = Multiple-Choice; CR = Constructed-Response:

Michigan-Developed Per Form Design Per Academic Year		
ELA	Operational MC items	With ACT as the college-entrance test for MME, the Social Studies CR is also scored for ELA. No other ELA items needed with ACT. This might change with another College-Entrance test.
	Operational CR items	
	Embedded Field Assessment MC items	
	Embedded Field Assessment CR items	
	Pages for subject	
	Sections for subject	
Math	Common Operational MC items/Form	11
	Matrixed Operational MC items/Form	8
	Embedded Field-Test MC items/Form	8
	Pages for subject	16
	Sections for subject	1
Science	Common Operational MC items/Form	16
	Matrixed Operational MC items/Form	16
	Embedded Field-Test MC items/Form	17
	Pages for subject	20
	Sections for subject	1
Social Studies	Common Operational MC items/Form	36
	Common Operational CR items/Form	1
	Embedded Field-Test MC items/Form	12
	Embedded Field-Test CR items/Form	1
	Pages for subject	24
	Sections for subject	1



Michigan-Developed Material Needs Per Academic Year		
Materials For All Subjects	Standard assessment booklets	200,000
	Forms	13
	Pages per Form	64
	Sections per Form	3
	Enlarged print assessment booklets	250
	Braille assessment booklets	45
	Acetate Ruler	200,000
	Acetate Ruler for Enlarged Print	250
	Acetate Ruler for Braille	45
	Audiotape/Audio DVD (6,000:4,000 per content area)	18,000:12,000
	Reader Script – English Version (1,700 per content area for ELL use at schools, 1 per content area to create audio versions, plus 1 for creating a Braille version)	5,104
	Reader Script – Spanish Version (10 per content area)	30
	Reader Script – Arabic Version (10 per content area)	30
	VHS/DVD Video – English Version (200:500 per content area)	600:1500
	VHS/DVD Video – Spanish Version (100:500 per content area)	300:1500
	VHS/DVD Video – Arabic Version (100:400 per content area)	300:1200
	Class/Group Sheets	5,000
	School Header Sheet	4,000
	Student Labels	210,000
	Answer document	210,000

2. This table covers materials that are not component specific for the MME Assessment:

All Subjects	
Assessment administration booklet	17,000
Assessment Accommodations administration booklet	25,000



**Appendix B: Michigan Merit Examination**

**Conceptual Draft Schedule Using Current  
College-Entrance & Work Skills Testing Components**

<b>Spring 2009</b>	<b>Initial Dates</b>	<b>Makeup Dates</b>	<b>Assessments</b>	<b>Students Tested</b>
	March 10	March 24	ACT Plus Writing®	All Grade 11  plus Grade 12 as needed
	March 11	March 25	WorkKeys® <ul style="list-style-type: none"> <li>• Applied Mathematics</li> <li>• Reading for Information</li> <li>• Locating Information</li> </ul>	
	March 12	March 26	Michigan Mathematics Michigan Science Michigan Social Studies	

<b>Spring 2010</b>	<b>Initial Dates</b>	<b>Makeup Dates</b>	<b>Assessments</b>	<b>Students Tested</b>
	March 9	March 23	ACT Plus Writing®	All Grade 11  plus Grade 12 as needed
	March 10	March 24	WorkKeys® <ul style="list-style-type: none"> <li>• Applied Mathematics</li> <li>• Reading for Information</li> <li>• Locating Information</li> </ul>	
	March 11	March 25	Michigan Mathematics Michigan Science Michigan Social Studies	

<b>Spring 2011</b>	<b>Initial Dates</b>	<b>Makeup Dates</b>	<b>Assessments</b>	<b>Students Tested</b>
	March date to be determined	March date to be determined	ACT Plus Writing®	All Grade 11  plus Grade 12 as needed
	March date to be determined	March date to be determined	WorkKeys® <ul style="list-style-type: none"> <li>• Applied Mathematics</li> <li>• Reading for Information</li> <li>• Locating Information</li> </ul>	
	March date to be determined	March date to be determined	Michigan Mathematics Michigan Science Michigan Social Studies	



## Appendix C: Information Technology Quality Plan

### A. Project Scope

The information technology system modules to be developed and implemented within the scope of this Contract as detailed herein.

### B. Deliverable Description

The principle deliverables for each IT module are identified in this Quality Plan in section G – Project Deliverables by Phase. Deliverables described under Section 1.103 Environment in this Contract is also required.

### C. Acceptance Criteria

Acceptance of these deliverables are defined by contract provisions and the IT Quality Plan. This includes adherence to the agreed-upon development methodology and standards.

System modules are acceptable when all required deliverables have been approved, system and user acceptance testing is successfully completed and approved, and the software is fully implemented and certified operable in the production environment. Unit testing will include technical review by DIT for compliance with security standards, State of Michigan standards and conformance to guidelines on web-based application appearance and function.

Milestones as follows:

Overall system design concept review and acceptance by CCI and DIT for each system module.

For each module:

- Biweekly status on progress, discrepancies and issues.
- Requirements completion and certification.
- Architecture and design certification with DIT
- Software technical review by DIT
- Quality assurance testing and certification
- Implementation operability certification (see 2.105 Performance and Reliability Evaluation (PARE))
- Updated Documentation

### D. Quality Assurance Activities

Test Plan: A thorough test plan will be executed for each system module to be developed. This thorough testing process will ensure the system product meets business requirements and project standards and operates successfully in the deployment environments. The Department of Education assures that user program leaders and staff selected for Quality assurance acceptance testing will be able to devote the time required to assure satisfactory quality of testing.

A qualified DIT staff member will conduct methods and product quality control reviews throughout the project. This person will report independently of the project staff to the project manager on methods and standards compliance issues, acceptance of project deliverables, alignment with user requirements, and effectiveness of management controls.

### E. Project Monitoring and Control

The principle project control tool is the project schedule. The project will take status checkpoints every week (unless otherwise agreed to with the CCI) during the development process. Control deliverables include formal status report, formal discrepancy/issue log review, review meeting or conference call)

- Project schedule and weekly status reports.
- Ongoing logging and tracking of project issues with timely resolution.
- Rigorous quality assurance process.
- Both continuous observation and scheduled formal overall project progress review sessions for system modules with feedback to the Contractor, CCI, and DIT project manager.

### F. Project Team Quality Responsibilities

As noted earlier, the mechanics of the development cycle require several quality checks by the project team. These include:

1. Definition of system module requirements and approval with the client.
2. Overall architecture and design review by DIT, including conformance with standards and technology environment requirements, compliance with appearance and web interface requirements, compliance with security requirements and general adherence to industry best practices.



3. Adherence to the test plan. Testing against functionality checklists, requirements test scripts, performance benchmarks established as part of the development, system load testing. Formal discrepancy reporting and resolution processing across all stages of testing.
4. User acceptance testing of each system module delivered. This includes confirmation that agreed-upon functionality levels and requirements have been achieved.
5. Final acceptance testing,
6. Formal clearance of all discrepancy and issue logs prior to user acceptance and quality assurance sign off and before production implementation of each module.

**G. Quality Plan - Project Deliverables by Phase**

The following is a list of all deliverables required for Project Planning.

**Project Initiation and Planning**

<b>Deliverable</b>	<b>Software Used</b>	<b>Responsible</b>
Project Charter	MS Word	DIT IT Project Manager
Quality Plan	MS Word	DIT IT Project Manager
Communications Plan	MS Word	DIT IT Project Manager
Risk Management Plan	MS Word	DIT IT Project Manager
Project Schedule (including tasks for each module updated throughout the contract)	MS Project	Contract Project Manager
Information technology issue log documenting issues related to the system modules and resolution (updated throughout the contract).	MS Word	Contract Project Manager

The following is a list of all deliverables required for each system module.

**Analysis and Design**

<b>Deliverable</b>	<b>Software Used</b>	<b>Responsible</b>
Requirements documents with client and DIT sign-off	MS Word	Contract Project Manager
Technical Environment Architecture	MS Word	Contract Project Manager
Module System Design	MS Word	Contract Project Manager
<b>Physical Data Model</b>	Visio	Contract Project Manager
System and module Test Scripts including performance benchmarks and load balancing. User Acceptance Test Scripts	MS Word	Contract Project Manager
Design technical sign-off with DIT project manager.	MS Word	Contract Project Manager DIT IT Project Manager



**Construction and Testing**

<b>Deliverable</b>	<b>Software Used</b>	<b>Responsible</b>
Software source code and deployment files	Selected Development Software	Contract Project Manager
Implementation Plan for Testing	MS Word	Contract Project Manager
Software Technical Review with DIT sign-off	MS Word	Contract Project Manager
Completed module testing and results logged.	MS Word	Contract Project Manager
Completed System Testing and results logged	MS Word	Contract Project Manager
Training Plan and materials for client user testing	MS Word	Contract Project Manager
On-line Help	Robo Help	Contract Project Manager
Completed Client User Acceptance Testing and results logged	MS Word	Contract Project Manager
Client User Acceptance Sign Off	MS Word	Contract Project Manager DIT IT Project Manager
Quality Assurance Review Sign Off with DIT	MS Word	Contract Project Manager DIT IT Project Manager
Software Deployment and Implementation Plan	MS Word	Contract Project Manager

**Implementation**

<b>Deliverable</b>	<b>Software Used</b>	<b>Responsible</b>
Production software source code and deployment files.	Selected Development Software	Contract Project Manager
Software and Database Deployment to Production	Production Servers Updated	Contract Project Manager DIT IT Project Manager
Training Plan and materials	MS Word	Contract Project Manager
User Training Sessions Completed	MS Word	Contract Project Manager
Implementation Problems\Issues Logged and resolved.	MS Word	Contract Project Manager
Lesson Learned Discussion and Documentation Corresponding Standards/Procedures Updated	MS Word	Contract Project Manager DIT IT Project Manger
30-90 Day Post Implementation Review certification with client.	MS Word	Contract Project Manager DIT IT Project Manger

**Final Documentation**

<b>Deliverable</b>	<b>Software Used</b>	<b>Responsible</b>
Upon contract completion, Technology Transfer to DIT project staff on all system components completed including necessary training and documentation.	MS Word	Contract Project Manager
Maintenance and Support Plan	MS Word	Contract Project Manager
Enhancements Log	MS Word	Contract Project Manager



## **Quality Plan - System Test Plan**

### **Objectives of the System Test Plan**

The objective of the system test plan is to verify that the system operates correctly under a variety of data conditions and ensure that the navigation through the system is consistent and the system will perform successfully and provides the flexibility and components the user has requested. System testing includes testing the interfaces between other systems and correctness of inputs and outputs.

The testing standard defines the order of testing, test types to be executed and roles involved.

### **Method of Testing**

The test methodology is to verify that the entire process is correct and understandable to the user. The navigation of the system will be checked to confirm that it is straightforward and easy for the user to follow. The GUI will be checked to ensure that the system was designed with conformance to State standards on web-based application appearance and function.

The performance of the system will be checked using a database with a typical load of data and checking response time of processing and retrieval. The uploading/downloading of data, modification, deleting and printing reports will be tested.

All levels of the security system will be checked to confirm that users are limited to the functions assigned to their groups.

## **Overall Plan**

### **Testing Schedule**

The testing schedule for each module will be defined in the project schedule.

### **Testing Materials**

#### **Test Checklists and Test Script Scenarios**

To assure completeness of testing, checklist and test script scenarios will be documented after the module business requirements are finalized. The purpose is to itemize all test cases which must be executed to certify that the system meets business requirements, architecture and design standards.

### **Test Data**

A copy of the production database will be replicated to the testing database environment as needed to facilitate thorough testing. System interface modules will also be used to populate test data. Test data will also need to be created to ensure all test cases are executed.

### **Criteria for Passing Tests**

All test cases are required to pass unless otherwise specified in the test script. Success of the entire system will be judged by tester's satisfaction that the new system performs satisfactory and the GUI is consistent and understandable to the user.

For further information on Test Failures see the Procedure Control section of this document.

## **Procedure Control**

### **Test Initiation**

Testing will proceed following successful installation of the system setup and implementation in the appropriate test environment.

### **Test Execution**

The testers will execute all test cases within the timeframe scheduled.

### **Test Failure**

Any test not passing will be logged. All test failures will be corrected by the developer and re-tested. When a given problem is demonstrated to be an isolated one, a re-test of just that module will suffice. Where the problem does or can impact several areas of functionality all affected modules will be re-tested as appropriate.



rd - Scope of Test

	Test Scope	Target of Test	How it is Done	Type of Tests	Role	Testing Process
I N T E G R A T I O N	Unit (Objects)	Verify the control flows and the data flows for each module.	Development and executable environment. White-box, black box. GUI testing.	2&3	Developer	Use guidelines and test scripts from design phase to complete object level testing. Manually complete checklists to record test results. Maintain objects and retest until successful completion. Document additional test cases needed for complex logic.
	Module	System Module	Executable environment. Black box test.	1,2&3	Analyst	Following unit testing, Analyst and developer review test plans and make necessary changes. Analyst conducts testing and records results. Developer makes the necessary code changes. Analyst repeats necessary test cases until successful completion.
	System	Whole system version or release.	Executable environment. Function, performance testing.	4,5,6,7,8,9, 11	Architect, Developer, DBA, Analyst	System testing will be scheduled before implementation of a system version or release (iteration). Problems are logged for resolution. Developer makes the necessary code changes. Repeat necessary test cases until successful completion.
	User Acceptance	Whole system version or release.	Executable environment Testing at user site with test data.	2,3,8,10	User, Analyst	User acceptance testing will be scheduled after successful module and system testing of a system version or release (iteration). Problems are logged for resolution. Developer makes the necessary code changes. Repeat necessary test cases until successful completion.



## Types of Tests

### 1. Data & Database Integrity Testing

This test focuses on:

- Checking the integrity of the data types used and the referential integrity for the tables in the database.
- Ensure Database access methods and processes function properly and without data corruption.

#### Technique

Invoke each database access method and process, seeding each with valid and invalid data (or requests for data).

Inspect the database to ensure the data has been populated as intended, all database events occurred properly, or review the returned data to ensure that the correct data was retrieved.

#### Completion Criteria

All database access methods and processes, function as designed and without any data corruption.

#### Tasks

Developer - Test the SQL statements for the input data and the expected results.

DBA - Test the database design for the referential integrity.

### 2. Function Testing (Including functional regression testing)

This test focuses on:

- Requirements that can be traced directly to components and business rules.
- Verifying proper data acceptance, processing, and retrieval, and the appropriate implementation of the business rules.

#### Technique

Execute each module using valid and invalid data, to verify the following:

- The expected results occur when valid data is used.
- The appropriate error / warning messages are displayed when invalid data is used.
- Each business rule is properly applied.

#### Completion Criteria

All planned tests have been executed.

All identified defects have been addressed.

### 3. User Interface Testing

This test focuses on:

- Window objects and characteristics, such as menus, fonts, size, position, tree view controls conform to GUI standards.
- Navigation through the system properly reflects business process and requirements.

#### Technique

Create / modify tests for each window to verify proper navigation.

Prepare a checklist of the GUI Standards to be tested for the window or group of windows.

#### Completion Criteria

Each window successfully verified to remain consistent with the defined standards.

### 4. Performance Profiling

This test focuses on:

- Evaluating response times, transaction rates, and other time sensitive requirements.
- Verifying performance behaviors for designated transactions or business functions under the normal anticipated workload and anticipated worse case workload.

#### Technique

Use tests developed for Function Testing

Develop and run scripts on one (1) machine and repeat with multiple clients

**Completion Criteria**

Successful completion of the test scripts without any failures and within acceptable time allocation.

**5. Load Testing**

This test focuses on:

- Verifying performance behaviors, time for designated transactions or business cases under varying workload conditions.

**Technique**

Use tests developed for Function Testing with varying the number of transactions or number of times the transaction occurs.

**Completion Criteria**

Successful completion of the tests without any failures and within acceptable time allocation.

**6. Stress Testing**

This test focuses on:

Verifying that the target-of-test functions properly and without error under the following stress conditions:

- Little memory available on the server.
- Maximum number of clients connected (or simulated).
- Multiple users performing the same transactions against the same data / accounts.
- Worst case transaction volume / mix.

**Technique**

Use tests developed for Performance Profiling or Load Testing. To test limited resources, tests should be run on single machine, RAM on server should be reduced (or limited).

**Completion Criteria**

All planned tests are executed and specified system limits are reached / exceeded without the software or software failing.

**7. Volume Testing**

This test focuses on:

Verifying that the target-of-test successfully functions under the following high volume scenarios:

- Maximum number of clients connected all performing the same, worst case (performance) business function for an extended period.
- Maximum database size has been reached (actual or scaled) and multiple queries / report transactions are executed simultaneously.

**Technique**

Use tests developed for Performance Profiling or Load Testing.

**Completion Criteria**

All planned tests have been executed and specified system limits are reached / exceeded without the software failing.

**8. Security Testing**

This test focuses on:

- Verifying that a user can access only those functions / data for which their user group is provided permissions.
- Verifying security requirements are implemented correctly.

**Technique**

Identify and list each user group and the functions / data each group has permissions for.

Create tests for each user group and verify permissions by logging into the system with different user IDs.

Create tests to verify all data handling for inputs/outputs, uploads/downloads to meet security requirements.

**Completion Criteria**

For each known user group, the appropriate function / data are available and all transactions function as expected and run in prior function tests. For rest of the users the service is denied with a log in system administration log file. For all data handling scenarios verify proper security mechanisms are present and tested.



### **9. Configuration Testing**

This test focuses on:

- Verifying that the target-of-test functions properly on the required hardware / software configurations.

#### **Technique**

Use Function Test scripts. Open / close various non-target-of-test related software, such as the Microsoft applications, Excel and Word, either as part of the test or prior to the start of the test.

Repeat the above process, minimizing the available conventional memory on the client.

#### **Completion Criteria**

For each combination of the target-of-test and non-target-of-test software, all transactions are successfully completed without failure.

### **10. Installation Testing**

This test focuses on:

- Verifying that the software packages for the client and server properly installs onto each required hardware configuration for new installation, reinstallation or updating with new version.

#### **Technique**

Manually or develop installation scripts to validate the condition of the target machine.

#### **Completion Criteria**

The transactions for the software execute successfully without failure.

### **11. Integration Testing**

This test focuses on:

- Verifying proper integration of the software modules and business rules are followed correctly.

#### **Technique**

Use the function test scripts to verify the proper integration of the modules.

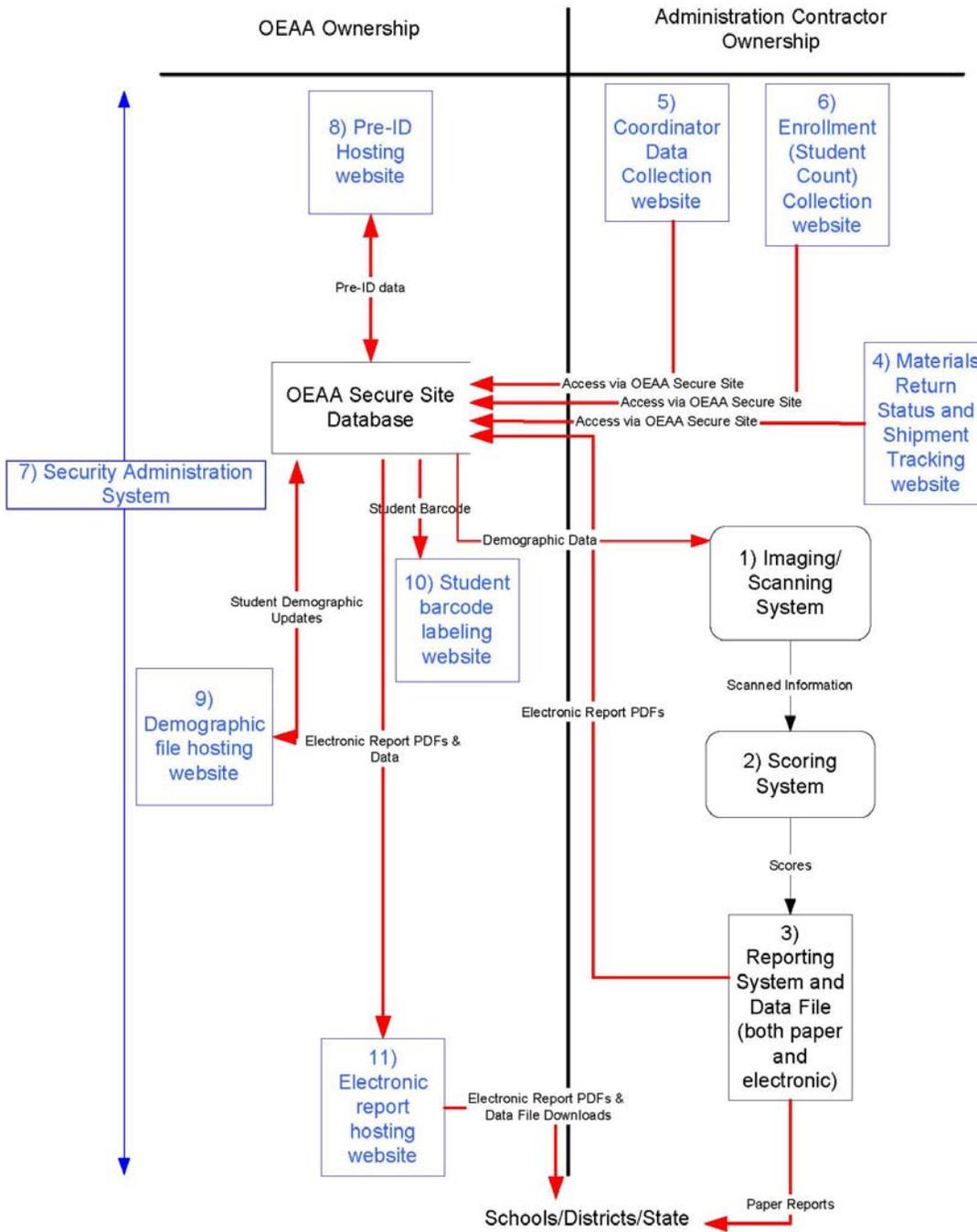
#### **Completion Criteria**

All transactions for the software execute successfully without failure.



Appendix D: MDE Computing Environment

OEAA Assessment Administration System Flow



Information regarding the State's information technology architecture and standards may be found at: <http://www.michigan.gov/dit>.



### Overview of Existing State Operating Environments for Education

Broadly classified into three (3) environments: Development/Test, Quality Assurance, and the Production Environment.

All code changes undergo a three (3) step process to be introduced into production:

1. First, code is developed locally on the developers workstation and tested in the "development" server environment, which is composed of MS SQL (2000 or 2005) database, Microsoft SQL 2000 or 2005 Reporting Services Server, and Windows 2000/2003 server that serves as both application and Web server (IIS 5.0 or 6.0). Work will be performed utilizing tools on the local developer's machine utilizing server based Visual Source Safe (6.0c) for source code control. Contractor will be given Read/Write on all development servers as needed.
2. Second, once development is completed and initially tested, the code is moved to the Quality Assurance (QA) environment. The QA environment mimics the production environment and consists of Load Balanced Web Servers (IIS 5.0 or 6.0), Application Server (Windows 2000/2003), Microsoft SQL 2000 or 2005 Reporting Services Server, and Active/Active Clustered SQL Servers (MS SQL 2000 or 2005). QA pushes/changes are requested through the Remedy system. The installation script(s) and code is then tested. Client(s) perform final user acceptance testing (UAT) to verify proper functionality.
3. Finally, once approval has been received, the code changes are promoted by MDIT staff to the Production Environment utilizing the same installation script(s) used for the QA environment. The Production Environment is composed of Load Balanced Web Servers (IIS 5.0 or 6.0), Application Server (Windows 2000/2003), Microsoft SQL 2000 or 2005 Reporting Services Server, and Active/Active Clustered SQL Servers (MS SQL 2000 or 2005). Production pushes and changes to the production environment that could affect other sites in the environment must be requested through the Remedy system.

The current workplace technology for MDE environment includes:

- Windows 2000 Server SP4 or 2003
- Internet Information Services 5.0 or 6.0
- SQL Server 2000 Enterprise Edition SP3 or SQL Enterprise Edition 2005
- Microsoft SQL 2000 or 2005 Reporting Services
- Cisco CSS 11000 series content services switch
- SAN (storage area network) technology for data storage
- NAS (network area storage) technology for file storage

The following software tools and skills are used:

- Microsoft Visual Studio 6.0 (Visual Basic, Visual FoxPro, and C++)
- Microsoft Visual Studio 2003 (1.1 and 2.0 framework, VB.Net, C#.Net, ASP.Net, and Microsoft SQL Reporting Services)
- Microsoft Visual Studio 2005 (1.1 and 2.0 framework, VB.Net, C#.Net, ASP.Net, and Microsoft SQL Reporting Services)
- Microsoft SQL (2000 & 2005)
- Microsoft Message Queue (MSMQ)
- Microsoft Visual Source Safe (6.0c)
- Microsoft Access 2000 and above
- Microsoft Project
- Microsoft Visio
- HTML
- JavaScript
- XML
- FTP
- SMTP

### State Network Environment

The State of Michigan has a very complex network. The network has different perimeter entry points, and an internal network made up of a large WAN, a large MAN, and three (3) hosting centers located in the Lansing metropolitan area.

**Contractor Extranet:** This zone allows Contractors to connect to the State's network via either point to point WAN circuits, or Gateway to Gateway VPN over the internet. The State currently allows Contractors to place their network equipment on our premise, or they can terminate their connection at our dmarc at an SBC facility. This zone is separated from the State's network with a firewall. This access is application only; remote control access is not allowed.



**Local Government Extranet:** This Zone allows local government entities access to applications on the State's network. This is provided by the provisioning of separate WAN circuits on the State's WAN cloud. This zone is separated from the State's network with a firewall.

**State of Michigan's Lansing Metropolitan Area Network (LMAN):** This is the State's high-speed backbone network that is utilized by the State's employees to access SOM resources and internet resources. The backbone is made up of redundant fiber links capable of transporting 2GBPS of traffic. Several State buildings as well as the State's three (3) hosting centers are also connected to the backbone through a distribution layer network.

**Agency Internet DMZ:** This zone is for public-facing server access to the Internet. This zone is firewall protected from the Internet, as well as from the LMAN. Servers in this zone can connect with 100mb Ethernet. The State currently has Internet services provided by Merit and Sprint to provide redundancy. This zone is available at all three (3) hosting centers.



Appendix E: File Formats

I. Pre-Identification File Format

Pre-Identification District Upload Record Format

Start Pos	End Pos	Field Length	Data Type	Field Name	Data Requirements
1	5	5	Numeric	<b>District Number</b>	State assigned district number, cannot be blank
6	9	4	Numeric	<b>School Number</b>	State assigned school number, cannot be blank
10	11	2	Numeric	<b>Pupil grade</b>	04, 05, 07,08, 10, 11 & 12 cannot be blank, must be numeric
12	27	16	Alpha	<b>Pupil last name</b>	Alpha only, no commas or special characters, cannot be blank, left justified
28	39	12	Alpha	<b>Pupil first name</b>	Alpha only, no commas or special characters, cannot be blank, left justified
40	40	1	Alpha	Pupil middle initial	Alpha or blank
41	50	10	Numeric	Student number	Numeric or blank position (no alpha or special characters) (the field is regarded as one data field, not 10 individual fields)
51	51	1	Alpha	<b>Student gender</b>	M' = Male, 'F' = Female, cannot be blank
52	53	2	Numeric	<b>DOB month</b>	Date of birth '01' thur '12', cannot be blank (must be 2 digits)
54	55	2	Numeric	<b>DOB day</b>	Date of birth '01' thur '31', cannot be blank (must be 2 digits)
56	57	2	Numeric	<b>DOB year</b>	Date of birth '00' thur '99', cannot be blank (must be 2 digits)
58	58	1	Numeric	<b>Student Ethnicity</b>	Student Ethnicity - must be generic 1. American Indian or Alaskan Native 2. Asian or Pacific Islander 3. Black, not of Hispanic Origin 4. Hispanic 5. White, not of Hispanic Origin 6. Multiracial 7. Other
59	60	2	Filler	Unused	Leave this area blank
61	61	1	Alpha	S.E.	Special Education (S.E.) 'Y' or blank  A Special Education student is a person under 26 years of age who is determined by an individualized educational planning committee (IEPC) (or a hearing officer) to have a disability defined under Michigan's Administrative Rules (R340.1703-R340.1715) that necessitates special education.
62	62	1	Alpha	L.E.P.	Limited English Proficiency (L.E.P.) 'Y' or blank  Children who have or reasonably may be expected to have difficulty performing ordinary classwork in English because their native tongue is a language other than English or because they come from a home or environment where the primary language used is a language other than English.
63	63	1	Alpha	Accomodations	Accomodations (Accom) 'Y' or blank  Any testing provision made so that the effect of a disability is minimized and so a student is provided an opportunity to demonstrate the degree of achievement he or she actually possesses.



Start Pos	End Pos	Field Length	Data Type	Field Name	Data Requirements
64	64	1	Alpha	Migratory Status	Migratory Status (M.S.) 'Y' or blank A student who has moved with a parent/guardian within the past year across state boundaries in order that a parent/guardian might secure temporary or seasonal employment.
65	65	1	Alpha	Econ. Disadvantaged	Economically Disadvantaged (E.D.) 'Y' or blank. Based on free/reduced lunch eligibility or other criteria.
66	66	1	Alpha	Mobility	Mobility (MOB) 'Y' or blank (A student who has been enrolled in this school or its feeder school for less than one year at the time the MEAP test is administered).
67	68	2	Numeric	Research Code I	Research Code I '01' thru '10' or blank (must be 2-gisits)
69	70	2	Numeric	Research Code II	Research Code II '01' thru '10' or blank (must be 2-gisits)
71	74	4	Numeric	Feeder School Code	Must be the official four digit state-assigned school code (numeric or blank)
75	82	8	A/N	Administration Code	Adminstration Code (district use, free format, printed on document)
83	91	9	Numeric	Social Security Num	Social Security Number (9-digit number or blank)
92	99	8	Filler	Unused	Leave this area blank
100	134	35	A/N	Pupil Address	Pupil Address
135	154	20	A/N	Pupil City	Pupil City
155	156	2	Alpha	Pupil State	Pupil State
157	161	5	Numeric	Pupil Zipcode	Pupil Zipcode
162	167	6	Numeric	Graduation Date	Expected High School Date of Graduation (MMYYYY or blank)
168	174	7	Numeric	Merit ID Number	Merit Identification Number (same as HST ID Number) must have all seven digits including leading zeroes.
175	178	4	Numeric	Math Course ID	Math Course/group code - alphanumeric - used for test distribution and reporting
179	182	4	Numeric	Reading Course ID	No longer used
183	186	4	Numeric	Science Course ID	Science Course/group code - alphanumeric
187	190	4	Numeric	Writing Course ID	No longer used
191	194	4	Numeric	SS Course ID	Social Studies Course/group code - alphanumeric
195	198	4	Numeric	ELA Course ID	English Language Arts Course/group code - alphanumeric
199	199	1	Filler	Unused	Leave this area blank
200	200	1	Filler	Unused	Leave this area blank
201	220	20	Alpha	Birth City	City the student was born in.
221	221	1	Numeric	Birth Order	Used in the case of twins with the same name and gender.
222	231	10	Numeric	UIC	Unique Identifier from CEPI.



Note 1: Fields shaded in gray are new for this test period and **optional**.

Note 2: If course/group codes are present prior to Pre-ID overprinting, answer folders will be shipped sorted alphabetically by Course/group by grade by subject by school. Course/group codes will also be available for reporting. Districts will be provided with a batch method to update these codes prior to reporting if needed.

Version 1.0



**II. Student Demographic File**

This file contains one (1) record per student per test cycle.

Field	Type	Length	NULL	On Downloadable Research File	Comments/Questions
TestCycle	int	2		Yes	
TestType	VarChar	5		Yes	MEAP, MI-Access, HSA, MME, ELPA
StudentNumber	VarChar	10		Yes	
ISDCCode	Int	2		Yes	
DistrictCode	VarChar	5		Yes	
SchoolCode (Building Code)	VarChar	5		Yes	
Feeder School	VarChar	5		Yes	
Grade	VarChar	2		Yes	
Barcode	VarChar	10		Yes	
LastName	VarChar	25		Yes	
FirstName	VarChar	25		Yes	
MiddleInitial	Char	1		Yes	
UIC	Char	10		Yes	
Grade	VarChar	2		Yes	
Gender	VarChar	1		Yes	
Ethnic	VarChar	1		Yes	
DOB (DOB_Month, DOB_Day etc)	datetime	8		Yes	Reformat to MMDDYYYY format
ED	Bit	1		Yes	"1" if true. "0" or blank for not true.
SE	Bit	1		Yes	"1" if true. "0" or blank for not true.
LEP	Bit	1		Yes	"1" if true. "0" or blank for not true.
MS	Bit	1		Yes	"1" if true. "0" or blank for not true.
Flep	Bit	1		Yes	"1" if true. "0" or blank for not true.
LTFAY	Bit	1		Yes	"1" if true. "0" or blank for not true.
Migrant	Bit	1		Yes	"1" if true. "0" or blank for not true.
Mobility	Bit	1		Yes	"1" if true. "0" or blank for not true.



**III. Student Scores File**

This file is one (1) record per student per subject, strand, domain, and benchmark. With rollups at each level.

Field	Type	Length	NULL	On Downloadable Research File	Comments/Questions
TestCycle	int	2			
StudentNumber	VarChar	10			
ISDCCode	Int	2			
DistrictCode	VarChar	5			
SchoolCode (Building Code)	VarChar	5			
Grade	VarChar	2			
ClassGroupCode	VarChar	5			
Barcode	VarChar	10			
UIC	VarChar	10			
Subject	VarChar	10		Yes	
Strand	Varchar	5	NULL	Yes	NULL = All Strands
Domain	VarChar	5	NULL	Yes	NULL = All Domains
Benchmark	VarChar	5	NULL	Yes	NULL = All Benchmarks
FormNumber	int	4		Yes	
Valid	bit	1		Yes	
RawScore	decimal(8,2)	8		Yes	Every level
PercentCorrect	decimal(8,2)	8		Yes	Every level
Unethical	bit	1		Yes	Only for Subject rollup
Attempted	bit	1		Yes	Only for Subject rollup
NonStandardAccom	bit	1		Yes	Only for Subject rollup
StandardAccom	bit	1		Yes	Only for Subject rollup
PerformanceLevel	int	4		Yes	Only for Subject rollup
ScaleScore	int	4		Yes	Only for Subject rollup



**IV. Student Item File**

This file is one (1) record per student per item presented. If an item assesses multiple benchmarks, then the item will appear multiple times under each benchmark.

Field	Type	Length	NULL	On Downloadable Research File	Comments/Questions
TestCycle	int	2			
StudentNumber	VarChar	10			
ISDCCode	Int	2			
DistrictCode	VarChar	5			
SchoolCode (Building Code)	VarChar	5			
Grade	VarChar	2			
ClassGroupCode	VarChar	5	NULL		
Barcode	VarChar	10			
UIC	VarChar	10			
Subject	VarChar	10		Yes	
Strand	Varchar	5		Yes	
Domain	VarChar	5		Yes	
Benchmark	VarChar	5		Yes	
Multibenchmark	Bit	1		Yes	Item assesses multiple benchmarks (count only once); "1" if true. "0" or blank for not true.
FormNumber	int	4		Yes	
ItemNumber	int	4			
ItemPosition	int	4			
ReleasedItemNumber	Int	4	NULL	Yes	
Type	VarChar	2		Yes	CR or MC
FieldTest	Bit	1			"1" if true. "0" or blank for not true.
ExtendedCore	Bit	1		Yes	"1" if true. "0" or blank for not true.
FutureCore	Bit	1		Yes	"1" if true. "0" or blank for not true.
Response	Varchar	1	NULL	Yes	NULL for CR Items
FinalScore	decimal(4,1)	4		Yes	
Score1	int	4	NULL	Yes	CR Only
Score2	int	4	NULL	Yes	CR Only
Score3	int	4	NULL	Yes	CR Only
CommentCodes	VarChar	6	NULL	Yes	CR Only
ConditionCode	VarChar	1	NULL	Yes	CR Only
ErasureString	VarChar	4	NULL		0,1,2 in ABCD; 0 = No mark, 1 = Full Mark, 2 = Erasure, Null for CR Items



**V. Summary Subject File**

This file contains one (1) set of records for statewide and per ISD, district, and building. At each of those levels there is a record for each grade, subject, strand, domain, and benchmark with rollups at each level.

Field	Type	Length	NULL	On Downloadable Research File	Comments/Questions
TestCycle	int	2			20 = MEAP, 22 = HS
TestType	Varchar	10			MEAP = gradea 3-8, HS = Grades 9-12
ISDCCode	Varchar	2	NULL		NULL = Statewide
DistrictCode	Varchar	5	NULL		NULL = All Districts
BuildingCode	Varchar	5	NULL		NULL = All Buildings
Private	bit	1			1 = Private, 0 = Non-Private
Charter	Char	1			P = Public, C = Charter, N = Non-Public
Grade	Varchar	2			Grades 03 - 12
Subject	Varchar	5			
Strand	Varchar	5	NULL		NULL = All Strands
Domain	VarChar	5	NULL		NULL = All Domains
Benchmark	VarChar	5	NULL		NULL = All Benchmarks
TotalValid	int	4			
TotalTested	Int	8			Total students that sent in tests
AvgRawScore	decimal(4,1)	4			
StdDevRawScore	decimal(4,1)	4			
AvgSS	decimal(4,1)	4			Subject Rollup Only
StdDevSS	decimal(4,1)	4			Subject Rollup Only
PL1n	int	4			Subject Rollup Only
PL2n	int	4			Subject Rollup Only
PL3n	int	4			Subject Rollup Only
PL4n	int	4			Subject Rollup Only
Metn	Int	8			Subject Rollup Only; PL1n + PL2n
DidNotMeetn	Int	8			Subject Rollup Only; PL3n + PL4n



**VI. Summary Subgroup File**

This file is one (1) set of records for statewide and per ISD, district, and building. With rollups for each NCLB subgroup.

Field	Type	Length	NULL	On Downloadable Research File	Comments/Questions
TestCycle	int	2			20 = MEAP, 22 = HS
TestType	Varchar	10			MEAP = gradea 3-8, HS = Grades 9-12
ISDCode	Varchar	2	NULL		NULL = Statewide
DistrictCode	Varchar	5	NULL		NULL = All Districts
BuildingCode	Varchar	5	NULL		NULL = All Buildings
Private	bit	1			1 = Private, 0 = Non-Private
Charter	Char	1			P = Public, C = Charter, N = Non-Public
Grade	Varchar	2			Grades 03 - 12
Subject	Varchar	5			
SubgroupGroup	Varchar	10			All Students, Gender, Ethnicity, ED, LEP, FLEP, Migrant, Homeless, StandardAccom, NonstandardAccom
Subgroup	VarChar	25			NCLB Subgroups
SubSubgroup	VarChar	3			Blank = All Students; SWD = Students With disabilities only; AED = All Except Students With Disabilities.
TotalValid	int	4			
TotalTested	Int	8			Total students that sent in tests
AvgRawScore	decimal(4,1)	4			
StdDevRawScore	decimal(4,1)	4			
AvgSS	decimal(4,1)	4			
StdDevSS	decimal(4,1)	4			
PL1n	int	4			
PL2n	int	4			
PL3n	int	4			
PL4n	int	4			
Metn	Int	8			
DidNotMeetn	Int	8			



**VII. Summary Item File**

This file contains records for statewide, ISD, district, and building levels. With a record at each level for each item presented to students in that level. If an item assesses multiple benchmarks, then there will be additional records for that item under each benchmark.

Field	Type	Length	NULL	On Downloadable Research File	Comments/Questions
TestCycle	int	2			20 = MEAP, 22 = HS
TestType	Varchar	10			MEAP = gradea 3-8, HS = Grades 9-12
ISDCode	Varchar	2	NULL		NULL = Statewide
DistrictCode	Varchar	5	NULL		NULL = All Districts
BuildingCode	Varchar	5	NULL		NULL = All Buildings
Private	bit	1			1 = Private, 0 = Non-Private
Charter	Char	1			P = Public, C = Charter, N = Non-Public
Grade	Varchar	2			Grades 03 - 12
Subject	Varchar	5			
Strand	Varchar	5			
Domain	VarChar	5			
Benchmark	VarChar	5			
Multibenchmark	Bit	1			Item assesses multiple benchmarks (count only once); "1" if true. "0" or blank for not true.
FormNumber	int	4			
ItemNumber	int	4			
ItemPosition	int	4			
ReleasedItemNumber	Int	4	NULL		
Type	VarChar	2			CR or MC
FieldTest	Bit	1			"1" if true. "0" or blank for not true.
ExtendedCore	Bit	1			"1" if true. "0" or blank for not true.
FutureCore	Bit	1			"1" if true. "0" or blank for not true.
TotalValid	int	4			
A/1	int	4	NULL		Count of students responding "A" or at Scorepoint 1
B/2	int	4	NULL		Count of students responding "B" or at Scorepoint 2
C/3	int	4	NULL		Count of students responding "C" or at Scorepoint 3
D/4	int	4	NULL		Count of students responding "D" or at Scorepoint 4
E/5	int	4	NULL		Count of students responding "E" or at Scorepoint 5
F/6	int	4	NULL		Count of students responding "F" or at Scorepoint 6
Omit	int	4	NULL		Count of students not responding
Multiple	Int	4	NULL		Count of students with multiple responses (MC Only)
AvgScore	decimal(4,1)	4	NULL		CR Only
MaxScore	int	4	NULL		Maximum Possible Points (CR Only)



## Appendix F: Contract Report Outline

This Contract report encompasses this entire Contract, with updates to the technical report for each cycle. The items in **bold** are descriptions of the processes that remain static across the span of this Contract report. Items not in bold are items that are updated for each cycle in an addendum to the volume. Items are delineated as the responsibility of OEAA, the Development Contractor (DC), or the Administration Contractor (AC).

Three (3) volumes are written for this Contract. Volume I gives background on the programs covered by the Contract.

Volume II describes and analyzes the processes used during this Contract, providing a historical record of and recommendations to improve the programs over the span of this Contract.

Volume III is a more traditional technical report containing descriptions of and summaries of psychometric and statistical procedures and analyses conducted over the life of this Contract.

Volumes II and III describe and analyze the quality control processes used by the Contractor and OEAA to assure high quality products, providing protocols and recommendations for monitoring program quality.

- I) Volume I: Background (OEAA)
    - A) Organizational Structure of Michigan Schools**
    - B) Statewide Testing and Accountability Programs**
    - C) Descriptions of Current and Planned Assessments**
    - D) Appropriate Uses for Scores and Reports**
      - 1. Individual Student Reports
      - 2. School, District, Intermediate School District, and State Reports
    - E) Organizations and Groups Involved**
      - 1. Michigan Government
        - a. Michigan State Board of Education (SBE)
        - b. Michigan Department of Education (MDE)
          - i. Office of Educational Assessment & Accountability (OEAA)
          - ii. Office of Educational Technology
        - c. Department of Information Technology (DIT)
        - d. Center for Educational Performance and Information (CEPI)
      - 2. Contractors
        - a. Administration Contractors and subcontractors
        - b. Development Contractors and subcontractors
      - 3. Educators
      - 4. Technical Advisory Committee (TAC)
- II) Volume II: Operations (AC, except as noted)
  - A) Project Management**
    - 1. **Scheduling**
      - a. Original Schedule
      - b. Implemented Schedule
      - c. Classification of significant changes to schedule
        - i. Risks
        - ii. Conflicts
        - iii. Infeasibility
      - d. Comparisons and recommendations for improvement
    - 2. **Issue Tracking**
      - a. Listing of significant issues
      - b. Summary of significant issues
      - c. Recommendations to reduce issues in future cycles
    - 3. **Contract Changes**
      - a. Listing of contract change requests
      - b. Recommendations to reduce contract changes in future cycles

**B) Item Banking (DC)**

1. **Quality control protocols**
2. **Variables gathered**
  - a. **Metadata**
  - b. **Statistical data**
3. **Item bank capacities**
  - a. **Item development**
  - b. **Test development**
    - i. **Test maps**
    - ii. **Test booklets**
  - c. **Integrated alignment**
    - i. **Webb analyses**
    - ii. **Other analyses**
4. **Summary of items in bank**
  - a. **By grade, subject, and content standard**
  - b. **Item development needs**

**C) Development/Production Activities**

1. **Information Technology**
  - a. **Modules developed**
  - b. **Modules already developed**
  - c. **Requirements gathering**
  - d. **Development**
  - e. **Testing**
  - f. **Implementation**
  - g. **Support**
  - h. **Training/Help**
  - i. **Maintenance**
2. **Item Development (DC)**
  - a. **Quality control protocols**
  - b. **Item Writing**
    - i. **Protocols**
    - ii. **Alignment**
    - iii. **Range-finding**
    - iv. **Summary of participants**
    - v. **Summary of results**
  - c. **Item Review**
    - i. **Protocols**
    - ii. **Alignment**
    - iii. **Summary of participants**
    - iv. **Summary of results**
3. **Test Development (DC)**
  - a. **Quality control protocols**
  - b. **Test blueprints**
  - c. **Forms pulling**
  - d. **Summary of forms development**
    - i. **Test maps**
    - ii. **Numbers of forms developed by subject**
    - iii. **Recommendations for improvement**
  - e. **Accommodations (AC in coordination with DC)**
    - i. **Types of accommodated materials developed**
    - ii. **Protocols for development**
    - iii. **Timelines for developments by type**
    - iv. **Summary of development by type**
    - v. **Issues**
    - vi. **Numbers**
  - f. **Recommendations for improvement**



4. **Development of Ancillary materials**
    - a. Manuals
    - b. Answer documents
    - c. Released tests
  5. **Production of test materials**
    - a. **Estimating materials needs**
    - b. **Production of materials**
    - c. Summary of all materials produced
    - d. Materials appendix including one set of all materials produced
- D) Administration Activities**
1. Forms distribution (sampling) plan
  2. **Pre-Identification of students (spray-on and labels)**
    - a. **Public schools**
    - b. **Private schools**
    - c. Summary of Pre-ID
      - i. Numbers pre-ID'd through spray on and labels
      - ii. Problematic districts
      - iii. Recommendations for improvement
  3. **Packaging & Distribution**
    - a. **Quality control protocols**
    - b. **First round**
    - c. **Additional orders**
    - d. **Summaries**
      - i. Numbers (and distributions by shipment) of first round and additional order materials shipped
      - ii. Additional production
        1. By subject, grade, and material type
        2. Problematic districts
      - iii. Extra materials remaining
        1. By subject, grade, and materials type
        2. Problematic districts
  4. **Site monitoring**
    - a. **Protocols**
    - b. Sites monitored
    - c. Summary of issues identified during site monitoring
    - d. Recommendations for improvement
      - i. Administration protocols
      - ii. Ethical guidelines
      - iii. Site monitoring protocols
  5. **Materials receipt and tracking**
    - a. **Quality control protocols**
      - i. **Regular receipts**
      - ii. **Exceptional receipts**
        1. **Late shipments**
        2. **Delayed or no return** of secure materials
    - b. **Summaries**
      - i. Numbers of materials received
      - ii. Numbers of materials not returned without follow-up
        1. Problematic districts
      - iii. Discrepancies between materials shipped number tested
        1. Problematic districts
- E) Hand-scoring**
1. **Range-finding (if needed)**
  2. **Training**
  3. **Hiring requirements**
  4. **Monitoring**
    - a. **Validity**
    - b. **Reliability**



5. Performance requirements
6. Rescoring requirements
7. Results summaries
  - a. Scorer characteristics
  - b. Numbers of items/essays scored by grade and subject
  - c. Dismissal and rescoring

**F) Materials processing—a separate section each for...**

1. Scanning, erasure analyses, MC scoring, range-finding (if needed), logging, tested roster
2. Quality control protocols
3. Summaries
  - a. Issues with materials processing
  - b. Summaries of problematic districts with erasures
    - i. (details in psychometric volume)
  - c. Summary of hand-scoring results and problems
    - i. High level summary of psychometrics
      1. (details in psychometric volume)
    - ii. Scoring alerts
    - iii. Child in danger alerts
  - d. Districts not checking tested roster
  - e. Changes requested in tested roster
    - i. Problematic districts

**G) Reporting activities**

1. Quality control protocols
  - a. Contractor protocols
    - i. Listing of issues identified
  - b. Customer Acceptance Testing (CAT)
    - i. Test Deck
    - ii. Live Data
    - iii. Post-release
    - iv. Listing of issues identified in CAT
2. Production
  - a. Electronic data file production
  - b. Print production
3. Posting
4. Distribution
5. Listing of issues with reporting
6. Recommendations for improvement

**H) Adequate Yearly Progress and EducationYES**

1. Quality Control
2. Appeals

**I) Ethical violations allegations and resolutions log**

**III. Volume III: Psychometrics & Technical Analyses (AC except as noted)**

**A) Test development analyses (DC)**

1. Target characteristics
  - a. Alignment
  - b. Distributions of p-values, pt-bis correlations
  - c. Distributions of IRT parameters
  - d. Projected SEM/Information curves
  - e. Projected reliability
  - f. Projected classification accuracy
  - g. Pre- vs. post-equating needs
2. Actual characteristics (as listed under target characteristics)

**B) Erasure analyses**

1. **Analysis procedures**
  - a. **Ratio of erasures to all responses**
  - b. **Ratio of wrong-to-right erasures versus all erasures**
  - c. **Simultaneous analysis**
  - d. **Unweighted analyses**
  - e. **Weighted analyses (weight = inverse distance to proficient previous year)**
2. **Data file description**
  - a. **Student level**
  - b. **Aggregate level**
3. **Summaries**
  - a. Distributions of erasure and Scatterplots of ratio statistics at
    - i. Student/grade/subject level
    - ii. Group/grade/subject code level
    - iii. School/grade/subject level
    - iv. District/grade/subject level
  - b. Scatterplots of erasure ratio statistics
  - c. Cutoff values for identifying problems
  - d. Problematic results
    - i. Districts
    - ii. Schools
    - iii. Groups

**C) Hand-scoring analyses**

1. Validity
2. Reliability
3. Consistency
4. Rater harshness (FACETS analysis)

**D) Model fit**

1. Summary results
2. Comparisons to other models

**E) Scaling and Equating**

1. **Quality control protocols**
2. **Cross-sectional analyses**
3. **Longitudinal analyses**
4. **Results**
  - a. **Cross-sectional**
    - i. Equating quality/equating error
    - ii. Distributions of scale scores (with cuts superimposed)
    - iii. Percentages in performance categories
    - iv. Cohort to cohort changes (means, SDs, % in PL, % proficient)
      1. Statewide
      2. District distributions
      3. School changes
  - b. **Longitudinal results**
    - i. Statewide transition tables
    - ii. Statewide distributions of progress scores
    - iii. Statewide distributions of progress levels

**F) Reliability**

1. **Cross-sectional**
  - a. SEM/Information curves (with cuts superimposed)
  - b. Internal consistency reliability
  - c. Empirical IRT reliability
  - d. Classification consistency
2. **Longitudinal**
  - a. Classification consistency

**G) Validity****1. Construct**

- a. Alignment
- b. Item review
- c. Small and large sample comparability analyses of accommodations
- d. Cross-sectional classification accuracy (Martineau, 2007)
- e. Longitudinal classification accuracy (extension of Martineau, 2007)
- f. DIF analysis, including ICCs and option boxplots by group
- g. SEM analyses of reduction of relationship between achievement and
  - i. demographics when accounting for prior achievement on
  - ii. same or other subjects

**2. Consequential**

- a. Surveys of test score uses
- b. Surveys of test score impacts

**H) Item analysis****1. Types of analysis by**

- a. **Operational items**
- b. **Field test items**
- c. **Pilot test items**

**2. Results****I) Standard Setting**

1. Plans
2. Results

**J) Adequate Yearly Progress and EducationYES (OEAA)**

1. Methods
2. Results

**Appendix G: Current Test Deck and Customer Acceptance Rules****Test Deck Rules**

**Each rule applies to every grade/answer document type/content area unless specified. Each answer document must have a barcode label unless specified.**

1. Insert two (2) completely blank answer documents for each answer document type and each administration type: Each set of answer documents (Day one (1), Day two (2), and Day three (3)) will have two (2) randomly inserted blank answer documents.
2. For Michigan Developed assessments, ensure that each option for Research Code I is selected for each content area. Select one (1) option from the RESEARCH I grid for each content area on each answer document. This will result in 10 answer documents where a different option is bubbled for each content area.
3. For Michigan Developed assessments, ensure that each option for Research Code II is selected for each content area. Select one (1) option from the RESEARCH II grid for each content area on each answer document. This will result in 10 answer documents where a different option is bubbled for each content area.
4. Ensure that each option for each question for each content in the School Use Only section is captured. Select one (1) option for each question in each content area in the School Use Only section for each answer document (minimum of 10 answer documents). At least one (1) answer document must have different options selected for each content area.
5. Insert one (1) answer document where one (1) option is selected for ONLY one (1) of each of the questions in each content area. A different question and a different option must be selected on each answer document. This will require a minimum of 10 answer documents.
6. Ensure that all options are being captured for each content area in the School Use Only section. Insert one (1) answer document where more than one (1) option is selected for each question for each content area.
7. Ensure that each Report Code option is captured. Select two (2) random documents and bubble Prohibited Behavior. The Prohibited Behavior option is the only report code bubbled.
8. Ensure that each Report Code option is captured. Bubble the remaining report codes on an answer document. Only one (1) one of the following options is bubbled on an answer document: Home Schooled; Formerly LEP; Homeless, Spanish, Arabic, Chaldean, and Other Language. This results in seven (7) answer documents.
9. Ensure that two (2) or more Report Code options on the same answer document are captured. Include one (1) answer document for each Report Code option with Prohibited Behavior bubbled on the same answer document (e.g. Home Schooled and Prohibited Behavior, Spanish and Prohibited Behavior). This results in seven (7) answer documents.
10. Include one (1) answer document where ALL of the following are bubbled: Home Schooled, Formerly LEP, Homeless, Prohibited Behavior, AND one of the following: Spanish, Arabic, Chaldean, or Other Language.
11. Ensure that each Form Type is captured on each answer document. One (1) Answer document per form type. Also include at least two (2) answer documents where more than one (1) form type is bubbled. Requires a minimum of six (6) answer documents for each type of answer document.
12. Ensure that duplicated answer documents result in the same answers. Two (2) answer documents where the student barcode label is the same and the responses are the same.
13. Ensure that two (2) answer documents with the same bar code label, but different form types are both captured.
14. Ensure that two (2) answer documents with the same bar code label, same form type, but different answer choices are both captured.
15. Ensure that two (2) answer documents with the same bar code label, but split test sessions are both captured. One (1) answer document will include first part of test, the other answer document will include the remaining portions of the test.
16. Coding Answers scenarios: One (1) answer document with all questions bubbled answer 'A'.
17. Coding Answers scenarios: One (1) answer document with all questions bubbled answer 'B'.
18. Coding Answers scenarios: One (1) answer document with all questions bubbled answer 'C'.
19. Coding Answers scenarios: One (1) answer document with all questions bubbled answer 'D'.
20. Coding Answers scenarios: One (1) answer document with all questions bubbled correctly and all CRs graded with maximum points.
21. Coding Answers scenarios: One (1) answer document with all questions bubbled incorrectly and all CRs graded with minimum points.
22. Coding Answers scenarios: One (1) answer document where all items are blank
23. Coding Answers scenarios: One (1) answer document with only question 1 bubbled (item 1) in each section.
24. Coding Answers scenarios: One (1) answer document with only one (1) question (NOT item # 1 and not the last item) bubbled in each section.



25. Coding Answers scenarios: One (1) answer document where all of the questions are blank except the last question.
26. Tests where each condition code is applied to each CR item. ELA CR one (1) item - Condition Code = A:
27. Tests where each condition code is applied to each CR item. ELA CR one (1) item - Condition Code = B:
28. Tests where each condition code is applied to each CR item. ELA CR one (1) item - Condition Code = C:
29. Tests where each condition code is applied to each CR item. Social St. Item - Condition = A:
30. Tests where each condition code is applied to each CR item. Social St. Item - Condition = B:
31. Tests where each condition code is applied to each CR item. Social St. Item - Condition = C:
32. Each CR group scores equates to each scoring level (min-max pts.). ELA CR item - Scoring Level 0.
33. Each CR group scores equates to each scoring level (min-max pts.). ELA CR item - Scoring Level 1.
34. Each CR group scores equates to each scoring level (min-max pts.). ELA CR item - Scoring Level 2.
35. Each CR group scores equates to each scoring level (min-max pts.). ELA CR item - Scoring Level 3.
36. Each CR group scores equates to each scoring level (min-max pts.). ELA CR item - Scoring Level 4.
37. Each CR group scores equates to each scoring level (min-max pts.). ELA CR item - Scoring Level 5.
38. Each CR group scores equates to each scoring level (min-max pts.). ELA CR item - Scoring Level 6.
39. Each CR group scores equates to each scoring level (min-max pts.). Social St. Item - Scoring Level = 0.
40. Each CR group scores equates to each scoring level (min-max pts.). Social St. Item - Scoring Level = 1.
41. Each CR group scores equates to each scoring level (min-max pts.). Social St. Item - Scoring Level = 2.
42. Each CR group scores equates to each scoring level (min-max pts.). Social St. Item - Scoring Level = 3.
43. Each CR group scores equates to each scoring level (min-max pts.). Social St. Item - Scoring Level = 4.
44. Each CR group scores equates to each scoring level (min-max pts.). Social St. Item - Scoring Level = 5.
45. Ensure that all ELA writing comment codes are reported.
46. Ensure that form codes are reported correctly.
47. Ensure that form codes are reported correctly.
48. Reporting: One (1) student has two (2) answer documents one (1) answer document with Prohibited Behavior bubbled and no questions answered and the other answer document with Prohibited Behavior bubbled and some questions are answered.
49. Reporting: One (1) student has two (2) answer documents for the same test administration where NonStandard is bubbled on one (1) answer document and not bubbled on the second answer document.
50. Reporting: One (1) student has two (2) answer documents for the same test administration: one (1) document with all answers blank and one (1) answer document with all answers bubbled. No administration type or form number on either answer document.
51. Reporting: One (1) student has two (2) answer documents with the mathematics test taken on an initial form and the remaining tests are blank, and another answer document where the science and social studies components are taken on a makeup form and the mathematics test is blank.
52. Reporting: One (1) student has two (2) answer documents with the mathematics test taken on an initial form and the remaining tests are blank, and another answer document where the science and social studies components are taken on an accommodated form and the mathematics test is blank.
53. Reporting: FLEP is bubbled on the student answer documents, but LEP is listed in the overprint table.

#### **MME Customer Acceptance: Definition of Tasks**

Customer Acceptance Testing (CAT) on the MME project is broken into several separate, but related, stages. This appendix identifies and explains those stages. The last section of this appendix identifies the tasks that need to be completed in order to progress through the different stages of CAT. It is important to note that each stage of the customer acceptance process takes place after the Contractor has performed a rigorous quality review of the test scenarios during each phase. The Contractor creates test scenarios based on OEAA requirements as well as additional test cases that are necessary to fully determine the solid functionality of the software applications used to process and report MME data, based upon the project requirements. The documented test plan, along with test results are then delivered to OEAA for review in each stage. This testing is done prior to each phase moving into the production environment, and the customer acceptance review by OEAA should also be done prior to the production stage.



## Test Deck Customer Acceptance

### Test Deck

The test deck is comprised of various test documents including answer folders that have been bubbled in order to meet a variety of requirements. These requirements include specific circumstances defined by OEAA as well as specific circumstances defined by the contractor. The documents are created in an attempt to provide as many different scenarios as possible with regard to scanning, scoring, and reporting of the data. The Contractor is to develop at least one (1) test case for each scanning, scoring, and reporting scenario; each test case requires that the Contractor either validate the data that is being captured at scanning or manipulate the data correctly (calculations, overrides, etc.) to yield the appropriate results at the end of the process. In addition, some scenarios will have multiple test cases as requested by OEAA. There are also some scenarios that, although not necessary to validate the software functionality, are necessary to provide OEAA with scenarios for their own special analysis of particular assessment situations.

The Contractor prepares the test deck documents as soon as answer folders are available from the Printer. The test deck includes both base test answer folders and emergency test answer folders.

### CAT Part 1 = CAT Scan Data

The purpose of CAT Part 1 is to verify the accuracy of the scanning equipment only. After the test deck documents are scanned, the scan data is exported into a data file that is provided to OEAA. Hard copies and images of the test deck documents are also provided. In addition, a "user friendly" PDF file of the data (Data Summary Sheet) is formatted and provided for use as a guide in comparing the documents with the scan data. The Contractor will add additional information to the test plan to aid OEAA staff in locating the hardcopies of the test documents within the stack of materials.

This data is "raw" scan data; that is, it is the data that is exported from the scanning system. The only data correction processes performed on the data are those needed for the scanning system to complete its export function.

CAT Part 1 is only concerned with the accuracy of the scan data. No scores are provided at this time. During CAT Part 1, any problems determined during the process must be communicated to the Contractor as they are found so that the Contractor can make the corrections to the scanning program in a timely manner. After acceptance of the scan data, the process moves forward to the next stage of CAT.

CAT Part 1 take place at the Contractor's location. At least two (2) OEAA representatives will take part in the process.

### CAT Part 2 = CAT Score Data

The purpose of CAT Part 2 is to verify the accuracy of the scoring and data entry systems and processes developed by the Contractor. After CA Part 1 is complete, the test deck data is run through MI's data entry processes in order to clean up the data in preparation for score reporting. After data entry is complete, the score data is exported into a data file that is provided to OEAA. The same hard copies and images of the test deck documents that are used in CAT Part 1 are also used in CAT Part 2. In addition, copies of the hand-scoring monitors are provided for comparison between the hand-scores in the data and the scores on the documents. Also, a Data Summary Sheet is provided for use as a guide in comparing the documents with the score data. When reviewing data for this stage of CAT, it is important that the reviewer refer to the test plan for each case being reviewed so that any discrepancies with expected results are resolved. For instance, the data that is bubbled on the answer document being reviewed may have changed purposely during the data entry process. This can affect multiple choice answers, demographic data, etc. From this stage forward, one cannot simply compare the hard copy or image of the document to the output, but must take into account during the review what should have happened and whether or not it did. The Contractor will add additional information to the test plan to aid OEAA with determining expected results.

CAT Part 2 is only concerned with the accuracy of the score data and data entry. The accuracy of the scan data has already been verified during CAT Part 1. Remember that the scoring keys are used as a lookup table function in the database. By this time, it should have already been determined that the scoring keys are correct and the focus should be on validating that they have been correctly applied. Scale scores are not always final at this point so the Contractor may use a representative set of scale scores to validate that the scale score lookup table is being read and applied properly within the Contractor software systems. We are not determining, at this point, if the scores are appropriate for the test, but rather that the scores in the database are being applied properly. Of course, any errors found with the scoring keys should be immediately communicated to the Contractor, but this stage of CAT is happening after the keys have been finalized and approved.



During CAT Part 2, any problems determined during the process will be communicated to the Contractor as they are found so that the Contractor can make the corrections to the scoring program in a timely manner. After acceptance of the score data, the process moves forward to the next stage of CAT.

CAT Part 2 will also take place at the Contractor site with at least 2 OEAA staff taking part in the process.

### **CAT Part 3 = CAT Reporting Data**

The purpose of CAT Part 3 is to verify the accuracy of the reporting processes developed by the Contractor. After CAT Part 2 is complete, the Contractor will develop a reporting extract file that includes at a minimum, test reporting scenarios for each performance level within each content area, across all single administration types and all possible combination administration types. This extract file will also include reporting scenarios for students with a complete set of MME answer documents (Day one (1), Day two (2), and Day three (3)) as well as one (1) student for each combination of answer document scenarios (Day one (1), Day two (2), and Day three (3) only, Day one (1) and Day two (2), Day one (1) and Day three (3), Day two (2) and Day three (3)). This reporting extract file will also include sufficient records for each reporting subgroup to have more than 10 students within a school, and each reporting subgroup to have less than 10 students within a school. Additionally, the file must have test scenarios for each situation in which a student would not meet attemptedness for each content area. The reporting data file will be used to generate and provide sample reports and a student data file to OEAA. The reports are generated in two (2) phases: first, the student level reports; second, the aggregate level reports. The reports, data file used to generate them, and a Data Summary Sheet are provided to OEAA. This phase of CAT is to validate that all reporting rules and overrides have been applied correctly during processing. The reporting rule covered by specific test cases will be noted in the expected results column of the test plan.

CAT Part 3 is only concerned with the accuracy of the reports as compared to the data file used to generate them. The accuracy of the scan data and score data have already been verified during CAT Parts 1 and 2. Therefore, this phase is a matter of matching the data file to the report samples and reviewing the expected results of the test case as noted on the test plan to ensure that the student in question is being reported as expected. For this reason, images and/or hard copies of the test deck documents are no longer needed.

During CAT Part 3, any problems determined during the process will be communicated to the Contractor as they are found so that the Contractor can make the corrections to the reporting program in a timely manner. After acceptance of the reporting data, the process moves forward to the next stage of CAT.

CAT Part 3 will also take place at the Contractor site with at least three (3) OEAA staff taking part in the process.

### **Sample Production Deck Reports CAT**

The purpose of the Sample Production Deck Reports CAT is to verify that "live" data is being reported in the same manner as the Test Deck data. After CAT Part 3 is complete, a Production Deck sample is used to generate a new extract reporting file. This sample includes several public and private schools (identified by OEAA), as well as district, ISD, and state level data (using only the CAT schools selected by OEAA). Samples of all reports are provided along with the data file used to generate the reports. A Data Summary Sheet is not provided during this part of customer acceptance because the actual reports are now serving that purpose.

Sample Production Deck Reports CAT is only concerned with the accuracy of the reports with regard to "live" data. The focus is on a comparison of the reports and the data used to generate them. The accuracy of the scan, score, and reporting data has already been verified during CAT Parts 1, 2, and 3. Hard copies or answer folder images for the CAT schools must be provided if requested by OEAA.

If the first three (3) stages (CAT Parts 1, 2, and 3) are completed accurately and thoroughly then there should not be any problems found during Sample Production Deck Reports CAT. However, if any problems are found then they will be communicated to the Contractor as they are found so that the Contractor can make the corrections to the reporting program in a timely manner. After acceptance of the production deck reporting data, the process moves forward to the last stage of CAT.

CAT Part 3 will also take place at the Contractor site with at least three (3) OEAA staff taking part in the process. The CAT reporting data file will be provided to OEAA in advance of CAT taking place.

**Production Deck Final Reports CAT**

The purpose of the Production Deck Final Reports CAT is to verify that the final reports are generated as expected. After the Sample Production Deck Reports CAT is complete, the Contractor generates the final reports. The student data file and the aggregate data file will be provided to OEAA for final review.

The focus of this final stage is on the layout and structure of the reports and accuracy of the aggregate data file as verified during the Sample Production Deck Reports CAT. If the previous stage of CAT is completed correctly, then this should be a very simple task. For this reason, there should not be any changes made during this stage of the process. Any changes made, no matter how slight, will require that the final reporting data file is generated again.

**Milestones Needed for CAT Stages to Proceed****CAT Part 1**

Answer Documents are printed and available  
Scan hardware and software is ready to go  
All answer keys (operational and emergency) are approved  
Sample scale scores and performance levels are available

**CAT Part 2**

CAT Part 1 is complete  
Image Edit processes are setup  
Score import processes are setup

**CAT Part 3**

CAT Part 2 is complete  
Reporting rules are defined  
All report programming is complete  
Test Deck reporting data file is generated

**Sample Production Deck Reports CAT**

CAT Part 3 is complete  
Production Deck schools are identified  
Hand-scoring is complete (or near completion)  
Data entry is complete (or near completion)  
Equating is approved  
All report-level data is provided

**Sample Production Deck reporting data file is generated****Production Deck Final Reports CAT**

Sample Production Deck Reports CAT is complete  
Final answer keys approved  
Hand-scoring is complete  
Data entry is complete  
Student data merge and other contractor data processes are complete  
All changes to demographic data (including Tested Roster updates) are complete  
Final reporting data file is generated



Appendix H  
Michigan Merit Examination - Michigan-Developed Components - Pricing Sheet  
For Test Cycles Spring 2009 thru Spring 2011

LN	Description	Unit Type	Est Quantity / Cycle (A)	Est Units Per Qty (B)	Est Total Units (C)	Spring 2009		Spring 2010		Spring 2011		Est Contract Sum ((C)*(D)+(E)+(F))
						Rate Per Unit (D)	Est. Sum ((C)*(D))	Rate Per Unit (E)	Est. Sum ((C)*(E))	Rate Per Unit (F)	Est. Sum ((C)*(F))	
13	<b>GENERAL ADMINISTRATION</b>											
14	Standard Setting (Per Meeting)	Meeting	1	1	1	\$98,145.00	\$98,145	\$101,089.00	\$101,089	\$104,122.00	\$104,122	\$303,356
15	Administration Briefings	Meeting	1	1	1	\$10,909.00	\$10,909	\$11,236.00	\$11,236	\$11,573.00	\$11,573	\$33,718
16	Staff Participation in On-Site Meetings	Meeting	1	1	1	\$20.60	\$20.60	\$21.15	\$21.15	\$21.65	\$21.65	\$63.45
17	Indirect Costs (per Meeting)	Meeting	12	1	12	\$220.89	\$2,650.68	\$227.23	\$2,726.76	\$282.26	\$3,387.12	\$761
18	Enroute Cost (Meetings - Persons Travelling)	Prsn/mg	12	4	48	\$30.413	\$1,460.96	\$31.281	\$1,515.36	\$32.149	\$1,565.88	\$4,542.18
19	Daily Costs (Days of Meeting - Persons Travelling)	Prsn/day	12	12	144	\$25.632	\$3,075.84	\$26.532	\$3,489.84	\$27.432	\$3,911.84	\$11,477.52
20	Call Center	Cycle	1	1	1	\$39,400.00	\$39,400	\$40,582.00	\$40,582	\$41,764.00	\$41,764	\$121,748
21	Technical Reports	Cycle	1	1	1	\$10,909.00	\$10,909	\$11,236.00	\$11,236	\$11,573.00	\$11,573	\$33,718
22	Post-Assessment Briefings	Meeting	1	1	1	\$84,770.00	\$84,770	\$86,246.00	\$86,246	\$87,722.00	\$87,722	\$258,738
23	On-site assessment administration assistants and MDE staff improvements (OSAAA)	actual	100,000	1	100,000	\$12.715	\$1,271.50	\$13.150	\$1,315.00	\$13.585	\$1,358.50	\$40,000.00
24	Mark-up for On-site assessment administration assistants (this line dependent on OSAAA)	OSAAA Actual	100,000	1	100,000	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
25	INFORMATION SYSTEMS											
26	(1) Imaging/Scanning System	Cycle	1	1	1	\$45,433.28	\$45,433	\$46,796.00	\$46,796	\$48,159.00	\$48,159	\$140,429
27	(2) Scoring System	Cycle	1	1	1	\$76,654.62	\$76,655	\$78,557.45	\$78,557	\$80,460.00	\$80,460	\$235,672
28	(3) Reporting System (includes IT development, project mgmt & testing)	Cycle	1	1	1	\$163,116.00	\$163,116	\$168,336.81	\$168,337	\$173,557.62	\$173,558	\$505,010
29	Psychometric review	Cycle	1	1	1	\$139,209.00	\$139,209	\$143,385.00	\$143,385	\$147,561.00	\$147,561	\$430,281
30	Program Management	Cycle	1	1	1	\$57,865.00	\$57,865	\$59,460.00	\$59,460	\$61,055.00	\$61,055	\$178,380
31	Testing Center for Michigan-developed (for non-public students that can not test at their own school)	site/day	8	1	8	\$863.00	\$6,904	\$889.00	\$7,112	\$916.00	\$7,328	\$21,344
32	General Indirect Costs	Cycle	1	1	1	\$17,515.00	\$17,515	\$18,287.00	\$18,287	\$19,059.00	\$19,059	\$54,861
33	Other-Additional Labor, Clerical/Production for Shipping	Package	3,000	1	3,000	\$11.00	\$33,000	\$11.28	\$33,840	\$11.56	\$34,680	\$101,520
34	Additional Labor, Administrative for Manifest Reporting	hour	40	1	40	\$77.00	\$3,080	\$78.93	\$3,157	\$80.86	\$3,234	\$9,554
35	Mileage to/from Lansing	mile	150	28	4,200	\$0.47	\$1,965	\$0.48	\$2,016	\$0.49	\$2,058	\$6,042
36	<b>GENERAL ADMINISTRATION SUBTOTAL</b>						\$1,392,581		\$1,401,429		\$1,423,150	\$4,217,160
42	<b>REPORT PRINTING AND DISTRIBUTION</b>											
43	Report Design	Cycle	1	1	1	\$6,027.00	\$6,027	\$6,208.00	\$6,208	\$6,394.00	\$6,394	\$18,629
44	Assessment results handbook Design - Guide to Reports	Cycle	1	1	1	\$15,099.60	\$15,099	\$16,609.90	\$16,610	\$18,270.00	\$18,270	\$49,979
45	Report Printing	page	500,000	2	1,000,000	\$0.0473	\$47,300	\$0.0485	\$48,500	\$0.0497	\$49,800	\$145,480
46	MME Spring Assessment Results	page	15,000	40	600,000	\$0.0473	\$709.50	\$0.0485	\$727.50	\$0.0497	\$745.50	\$2,282.50
47	MME Assessment results handbook	page	15,000	40	600,000	\$0.0473	\$709.50	\$0.0485	\$727.50	\$0.0497	\$745.50	\$2,282.50
48	Report Distribution	Package	1,500	1	1,500	\$13,594.7	\$20,392	\$14,032.00	\$21,048	\$14,580.00	\$21,822	\$63,172
49	Spring Assessment Results (Equal or Greater Than 500 Sheets Per Package)	Package	700	1	700	\$34,586.6	\$24,219	\$35,786.6	\$25,052	\$37,020.00	\$25,914	\$75,165
50	Additional costs for fuel surcharges and rural delivery charges will be added to these rates as published by DHL on their website.											
51	PDF Images	image	100,000	1	100,000	\$0.0088	\$880	\$0.009	\$900	\$0.0095	\$950	\$2,730
52	PDF Hard Drive	each	3	1	3	\$560.00	\$1,680	\$572.00	\$1,716	\$584.00	\$1,752	\$5,151
53	Hard Drive shipping cost to HOV Services	round trip	3	1	3	\$165.00	\$495	\$171.60	\$515	\$178.46	\$535	\$1,545
54	<b>REPORT PRINTING AND DISTRIBUTION SUBTOTAL</b>						\$144,352		\$149,648		\$155,174	\$445,173
59	Testing Materials - MME Spring Administration	page	50,000	2	100,000	\$0.035	\$3,500	\$0.035	\$3,500	\$0.035	\$3,500	\$10,500
60	School/Teacher Identification Sheets or other scannable sheets (up to two pages each)	document	14	1	14	\$10,584.00	\$148,176	\$10,902.00	\$152,628	\$11,220.00	\$157,080	\$458,010
61	Test Booklet Printing Setup	page	205,000	64	13,120,000	\$0.021	\$275,520	\$0.023	\$301,760	\$0.023	\$301,760	\$679,040
62	Test Booklets, Reader Scripts and Other Similar Booklets Printing	page	205,000	64	13,120,000	\$0.021	\$275,520	\$0.023	\$301,760	\$0.023	\$301,760	\$679,040

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Michigan Merit Exam V2.0



LN	Description	Unit Type	Est Quantity / Cycle (A)	Est Units Per Qty (B)	Est Total Units (C)	Spring 2009		Spring 2010		Spring 2011		Est Contract Sum [(C)*(D)+(E)+(F)]
						Rate Per Unit (D)	Est Sum [(C)*(D)]	Rate Per Unit (E)	Est Sum [(C)*(E)]	Rate Per Unit (F)	Est Sum [(C)*(F)]	
64	Answer Document Print Setup - Multiple Sheet Document.	document	1	1	1	\$872.30	\$872	\$872.30	\$872	\$872.30	\$872	\$2,617
65	Answer Document Print Setup - Multiple Sheet Document.	page	210,000	16	3,360,000	\$0.0166	\$66,448	\$0.0173	\$58,128	\$0.0177	\$59,472	\$174,048
66	Mathematics Rulers	each	200,000	1	200,000	\$0.29	\$58,000	\$0.30	\$60,000	\$0.31	\$62,000	\$180,000
67							\$542,516		\$576,888		\$584,810	\$1,704,215
68	<b>SUBTOTAL Spring Testing Materials</b>											
70	Pre-identification of Answer Documents	label	210,000	1	210,000	\$0.110	\$23,100	\$0.115	\$24,150	\$0.119	\$24,990	\$72,240
71	Student Identification labels (pre-printed)	label	50,000	1	50,000	\$0.019	\$950	\$0.021	\$1,050	\$0.022	\$1,100	\$3,100
72	Student Identification labels (blank)						\$24,050		\$25,200		\$26,090	\$73,340
73												
74												
75	Distributing Testina Materials.											
76	Packing and Sending Spring MME	Cycle	1	1	1	\$77,220.00	\$77,220	\$79,537.00	\$79,537	\$81,923.00	\$81,923	\$235,680
77	Retrieving Spring MME	Cycle	1	1	1	\$114,259.00	\$114,259	\$117,687.00	\$117,687	\$121,217.00	\$121,217	\$353,163
78							\$191,479		\$197,224		\$203,140	\$591,843
79												
80	Scanning Test Answer Documents (Includes Scoring Multiple Choice Responses)											
81	Spring MME - Michigan-Developed Test	Cycle	1	1	1	\$62,891.01	\$62,891	\$64,777.02	\$64,777	\$66,720.36	\$66,720	\$194,388
82							\$62,891		\$64,777		\$66,720	\$194,388
83												
84	Storage of Materials											
85	Image Scanning For Archiving (tif images)	cycle	1	1	1	\$56,112.84	\$56,113	\$57,795.99	\$57,796	\$59,529.12	\$59,529	\$173,438
86	Used Answer Documents (Store for Five Years for date of test then confidentially destroy)	year	5	1	5	\$2,177.00	\$10,885	\$2,242.00	\$11,210	\$2,379.00	\$11,895	\$35,990
87							\$66,998		\$69,006		\$71,424	\$207,428
88												
89	Disposal of Test Booklets and Un-Used Answer Documents	cycle	1	1	1	\$2,239.00	\$2,239	\$2,306.00	\$2,306	\$2,375.00	\$2,375	\$6,920
90	Spring MME (After appeals window)						\$2,239		\$2,306		\$2,375	\$6,920
91	<b>DISPOSAL OF MATERIALS SUBTOTAL</b>											\$6,920

8 All rates quoted are stand-alone. Any changes to actual quantities ordered shall not effect that rate or any other rate. If any rate quoted is part of a tier structure based on quantities, illustrate the tier structure.



LN	Description	Unit Type	Est Quantity/ Cycle (A)	Est Units Per Qty (B)	Est Total Units (C)	Spring 2009		Spring 2010		Spring 2011		Est Contract Sum [(C)]*(D)+(E)+(F)]
						Rate Per Unit (D)	Est Sum [(C)*(D)]	Rate Per Unit (E)	Est Sum [(C)*(E)]	Rate Per Unit (F)	Est Sum [(C)*(F)]	
94	Test Monitoring											
95	Test Monitoring	cycle	1	1	1	\$15,435.00	\$15,435	\$15,898.00	\$15,898	\$16,375.00	\$16,375	\$47,708
96	Investigation of testing sites	cycle	1	1	1	\$15,435.00	\$15,435	\$15,898.00	\$15,898	\$16,375.00	\$16,375	\$47,708
97	<b>TEST MONITORING SUBTOTAL</b>					<b>\$30,870</b>	<b>\$30,870</b>	<b>\$31,796</b>	<b>\$31,796</b>	<b>\$32,750</b>	<b>\$32,750</b>	<b>\$95,416</b>
98	Misc. Administration											
99												
100	Preparation and Distribution of Material or (Images) to Scoring Center	cycle	0	1	0	\$18,282.39	\$0	\$18,830.70	\$0	\$19,395.18	\$0	\$0
101												
102	Data Management and Transfer to State	cycle	1	1	1	\$22,133.79	\$22,134	\$22,796.76	\$22,797	\$23,480.31	\$23,480	\$68,411
103												
104	Transfer of CR Response from Handscoring (Paper or Image)	cycle	0	1	0	\$46,315.29	\$0	\$47,704.44	\$0	\$49,134.75	\$0	\$0
105												
106	Merging Handscoring data into Student Record	cycle	0	1	0	\$36,888.18	\$0	\$37,893.62	\$0	\$39,134.34	\$0	\$0
107												
108	Combining Multiple Choices and Constructed Response Scores and Tabulating Through To Performance Levels	cycle	0	1	0	\$39,759.09	\$0	\$40,951.26	\$0	\$42,180.18	\$0	\$0
109												
110	Network Management	cycle	1	1	1	\$15,342.39	\$15,342	\$15,803.97	\$15,804	\$16,275.84	\$16,276	\$47,422
111												
112	<b>MISC. ADMINISTRATION SUBTOTAL</b>					<b>\$37,476</b>	<b>\$37,476</b>	<b>\$38,601</b>	<b>\$38,601</b>	<b>\$39,756</b>	<b>\$39,756</b>	<b>\$115,833</b>
113												
114	MIME RANGEFINDING											
115	Michigan-developed test English Language Arts	cycle	0	1	0	\$49,555.00	\$0	\$51,040.00	\$0	\$52,571.00	\$0	\$0
116	Michigan-developed test Social Studies	cycle	0	1	0	\$19,754.00	\$0	\$20,347.00	\$0	\$20,957.00	\$0	\$0
117	<b>MIME RANGEFINDING SUBTOTAL</b>					<b>\$69,309.00</b>	<b>\$69,309</b>	<b>\$71,387.00</b>	<b>\$71,387</b>	<b>\$73,528.00</b>	<b>\$73,528</b>	<b>\$73,528</b>
118												
119	MIME HANDSCORING											
120	Preparation of Training and Qualifying Sets for Scoring	subject	0	1	0	\$5,523.00	\$0	\$5,687.00	\$0	\$5,859.00	\$0	\$0
121	Scoring (Scrd Resp = Scored Response)											
122	Michigan-developed test English Language Arts	Scrd Rsp	0	2	0	\$0.96	\$0	\$0.99	\$0	\$1.01	\$0	\$0
123	ELA Operational Item Writing Comments	Scrd Rsp	0	1	0	\$0.31	\$0	\$0.32	\$0	\$0.33	\$0	\$0
124	Michigan-developed test Social Studies	Scrd Rsp	0	2	0	\$1.29	\$0	\$1.31	\$0	\$1.36	\$0	\$0
125	<b>MIME HANDSCORING SUBTOTAL</b>					<b>\$6.56</b>	<b>\$6.56</b>	<b>\$6.62</b>	<b>\$6.62</b>	<b>\$6.70</b>	<b>\$6.70</b>	<b>\$6.70</b>
126												
127	<b>ESTIMATED CONTRACT TOTAL</b>					<b>\$2,495,452</b>	<b>\$2,495,452</b>	<b>\$2,556,875</b>	<b>\$2,556,875</b>	<b>\$2,605,390</b>	<b>\$2,605,390</b>	<b>\$7,657,717</b>

LN Description  
 8 All rates quoted are stand-alone. Any changes to actual quantities ordered shall not effect that rate or any other rate. If any rate quoted is part of a tier structure based on quantities, illustrate the tier structure.