



Fiscal Review Committee
Vendor: Questar Assessment, Inc.
Contract #: 50753 Amendment 2
Tracking #: 33111-01816

1. Summary letter
2. Supplemental documentation form
3. Edison query in Excel
4. Amendment request form for amendment 2
5. STS endorsement form
6. Original contract
7. Amendment 1
8. Proposed Amendment 2



BILL HASLAM
GOVERNOR

STATE OF TENNESSEE
DEPARTMENT OF EDUCATION
NINTH FLOOR, ANDREW JOHNSON TOWER
710 JAMES ROBERTSON PARKWAY
NASHVILLE, TN 37243-0375

CANDICE MCQUEEN
COMMISSIONER

SUBMITTED VIA ELECTRONIC MAIL

TO: Fiscal Review Committee

FROM: Candice McQueen, Commissioner

Date: 9/12/18

RE: Request to appear before the fiscal review committee regarding non-competitive contract amendment for agency tracking #: 33111-01816

Please consider the enclosed request to amend the department's contract with Questar Assessment, Inc. for development, administration, scoring, and reporting for Tennessee's state assessments in grades 3-11.

The proposed amendment aims to accomplish the following: (1) enhance performance measures through a scorecard containing Key Performance Indicators (KPIs) that detail expectations for performance and put fees at risk when those measures are not met; (2) reduce the maximum liability and adjust line items to maximize cost savings, including those supporting paper-based testing; (3) extend the term through the 2018-19 assessment cycle to enable Tennessee to meet requirements in state and federal law, including those within Tennessee Code Annotated Title 49 and Title 1 Part A of the federal Every Student Succeeds Act.

The department has reviewed the existing contract in rigorous detail with the state procurement office and Questar to identify opportunities to enhance performance expectations and maximize fiscal responsibility. The amendment reduces the maximum liability from \$150,000,000 to \$86,000,000 through extending at a reduced rate for the 2018-19 school year and eliminating funding that was originally allocated for 2019-20 and 2020-21. This amendment also strengthens the department's ability to reduce fees when services do not meet expectations based on the clearly defined metrics.

Preparation for the 2018-19 school year is already well underway with Questar, and extending and improving this existing partnership is the only procurement option that will allow for delivery of the assessment program in the current school year. The amendment is a commitment from both Questar and the department to deliver the best testing experience possible.

The department has already begun the process of developing a new request for proposals for delivery of the state assessment program beginning with the 2019-20 school year.

Supplemental Documentation Required for
Fiscal Review Committee

*Contact Name:	Joanna Collins	*Contact Phone:	615-770-3869
*Presenter's name(s):	Commissioner Candice McQueen, Elizabeth Fiveash, Joanna Collins, Tony Pratt		
Edison Contract Number: <i>(if applicable)</i>	50753	RFS Number: <i>(if applicable)</i>	33111-01816
*Original or Proposed Contract Begin Date:	7/13/2016	*Current or Proposed End Date:	11/30/2019
Current Request Amendment Number: <i>(if applicable)</i>	2		
Proposed Amendment Effective Date: <i>(if applicable)</i>	October 5, 2018 (or as soon as possible)		
*Department Submitting:	Department of Education		
*Division:	Assessment, Accountability Division		
*Date Submitted:	9/12/18		
*Submitted Within Sixty (60) days:	No		
<i>If not, explain:</i>	The changes in this amendment are needed as soon as possible because the provisions apply to the 2018-19 assessment cycle and preparation for this cycle is already well underway. It is in the best interest of the state to have the provisions relating to performance measures in place as soon as possible.		

Supplemental Documentation Required for
Fiscal Review Committee

*Contract Vendor Name:			Questar Assessment Inc.		
*Current or Proposed Maximum Liability:			\$ 86,000,000.00		
*Estimated Total Spend for Commodities:			N/A		
*Current or Proposed Contract Allocation by Fiscal Year: (as Shown on Most Current Fully Executed Contract Summary Sheet)					
FY: 2017	FY:2018	FY:2019	*FY2020 (pro_		
30000000.00	30000000.0 0	25995000.0 0	5000.00		
*Current Total Expenditures by Fiscal Year of Contract: (attach backup documentation from Edison)					
FY:2017	FY:2018	FY:2019	FY:2020	FY	FY
20697889.48	32691825.2 6		\$	\$	\$
<p>IF Contract Allocation has been greater than Contract Expenditures, please give the reasons and explain where surplus funds were spent:</p>			<p>Current expenditures have been less than the maximum liability for the first two fiscal years. This is due to the fact that invoices related to 2017-18 assessments were held for review and reduction based on performance. Therefore, there are still pending invoices related to 2017-18 assessments.</p>		

Supplemental Documentation Required for
Fiscal Review Committee

<p>IF surplus funds have been carried forward, please give the reasons and provide the authority for the carry forward provision:</p>		N/A	
<p>IF Contract Expenditures exceeded Contract Allocation, please give the reasons and explain how funding was acquired to pay the overage:</p>		N/A	
*Contract Funding Source/Amount:			
State:	\$5,392,316.50	Federal:	
<i>Interdepartmental:</i>		<i>Other:</i>	
If “ <i>other</i> ” please define:			
If “ <i>interdepartmental</i> ” please define:			
<p>Dates of All Previous Amendments or Revisions: <i>(if applicable)</i></p>		<p>Brief Description of Actions in Previous Amendments or Revisions: <i>(if applicable)</i></p>	
Amendment 1 4/20/17		Add a provision related to the licensing of third party materials	
<p>Method of Original Award: <i>(if applicable)</i></p>		Competitive	
<p>*What were the projected costs of the service for the entire term of the contract prior to contract award? How was this cost determined?</p>		<p>The original projected costs for the contract were \$150,000,000 over five years (now \$86,000,000 over three years). This was based on their response to the RFP.</p>	

Supplemental Documentation Required for
Fiscal Review Committee

<p>*List number of other potential vendors who could provide this good or service; efforts to identify other competitive procurement alternatives; and the reason(s) a sole-source contract is in the best interest of the State.</p>	<p>Securing another vendor to administer the state assessment program for the 2018-19 school year would not be a feasible alternative, as the yearly assessment cycle is already well under way. Tennessee's state assessment program fulfills a variety of requirements of state and federal law, including many requirements within TCA 49-1 and Title 1 Part A of the federal Every Student Succeeds Act. The upcoming request for proposals will result in a competitive process for the procurement of these services for future years.</p>
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Payments against a Contract 7

Unit	Sum Merchandise Amt	Edison Contract ID	Vendor ID	Vendor Name	Type	PO ID	Voucher ID	Invoice	Date	Fiscal Year
33101	28294.720	000000000000000000050753	0000196257	Questar Assessment Ir DFA		0000085478	00399891	0019878	6/27/2017	2017
33101	41805.080	000000000000000000050753	0000196257	Questar Assessment Ir DFA		0000082516	00385604	0019409	3/13/2017	2017
33101	1091945.800	000000000000000000050753	0000196257	Questar Assessment Ir DFA		0000081592	00382592	0019390	2/15/2017	2017
33101	1443591.530	000000000000000000050753	0000196257	Questar Assessment Ir DFA		0000083944	00393724	0019880	5/16/2017	2017
33101	2061696.070	000000000000000000050753	0000196257	Questar Assessment Ir DFA		0000081277	00380311	0019374	2/14/2017	2017
33101	3937978.880	000000000000000000050753	0000196257	Questar Assessment Ir DFA		0000083965	00393726	0019882	5/18/2017	2017
33101	12092577.400	000000000000000000050753	0000196257	Questar Assessment Ir DFA		0000083943	00393462	0019881	5/11/2017	2017

20697889.480

Payments against a Contract

6

Unit	Sum Merchandise Amt	Edison Contract ID	Vendor ID	Vendor Name	Type	PO ID	Voucher ID	Invoice	Date	Fiscal Year
33101	1550106.560	000000000000000000050753	000019625	Questar Assessment Inc	DFA	0000094502	00436616	0020661	3/22/2018	2018
33101	1752553.200	000000000000000000050753	000019625	Questar Assessment Inc	DFA	0000094525	00436612	0020659	3/22/2018	2018
33101	3084758.500	000000000000000000050753	000019625	Questar Assessment Inc	DFA	0000087663	00408451	0019916	9/6/2017	2018
33101	7753872.000	000000000000000000050753	000019625	Questar Assessment Inc	DFA	0000087794	00409325	0020528	9/21/2017	2018
33101	8759645.300	000000000000000000050753	000019625	Questar Assessment Inc	DFA	0000094527	00436614	0020658	3/22/2018	2018
33101	9790889.700	000000000000000000050753	000019625	Questar Assessment Inc	DFA	0000097696	00450096	0020676	6/19/2018	2018

32691825.260

Amendment Request

This request form is not required for amendments to grant contracts. Route a completed request, as one file in PDF format, via e-mail attachment sent to: Agsprs.Agsprs@tn.gov

APPROVED

CHIEF PROCUREMENT OFFICER

DATE

Agency request tracking #	33111-01816	
1. Procuring Agency	TN Department of Education (TDOE)	
2. Contractor	Questar	
3. Edison contract ID #	50753	
4. Proposed amendment #	2	
5. Contract's Original Effective Date	07/31/2016	
6. Current end date	11/30/2018	
7. Proposed end date	11/31/2019	
8. Current Maximum Liability or Estimated Liability	\$150,000,000.00	
9. Proposed Maximum Liability or Estimated Liability	\$86,000,000.00	
10. Strategic Technology Solutions Pre-Approval Endorsement Request – information technology service (N/A to THDA)	<input type="checkbox"/> Not Applicable <input checked="" type="checkbox"/> Attached	
11. eHealth Pre-Approval Endorsement Request – health-related professional, pharmaceutical, laboratory, or imaging	<input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Attached	
12. Human Resources Pre-Approval Endorsement Request – state employee training service	<input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Attached	
13. Explain why the proposed amendment is needed		
This amendment is needed to:		
<ul style="list-style-type: none"> Extend the contract term for 1 year pursuant to the renewal options in the contract. Reduce the maximum liability. The original maximum liability including the three optional years was \$30,000,000 per year with a total maximum liability of \$150,000,000. This amendment extends the contract to cover one additional yearly assessment cycle (2018-19) at a reduced rate and eliminates the money to support the additional two optional years. The TDOE will issue a new RFP for administering the state assessment program beginning with the 2019-20 school year. As a result, the maximum liability of the contract will be reduced to \$86,000,000. The savings for 2018-19 will offset the increased cost for the 		

Agency request tracking #	33111-01816
<p>assessment design work that has been moved to the TDOE's contract with the Educational Testing Service (#47402) and the savings from future years will go toward the contract resulting from the upcoming RFP.</p> <ul style="list-style-type: none"> • Revised pricing for some contract deliverables. This revised pricing primarily represents a reversion to the pricing from the earlier years of the contract for items that are required by paper-based testing, which will be used more extensively during the 2018-19 school year than originally planned due to the unexpected challenges with online assessment during the 2017-18 school year. • Update the scope – (1) include a scorecard with Key Performance Indicators (KPIs) designed to add clarity to the expectations for the quality of work provided by the vendor and the fees at risk for not meeting these expectations; (2) update other definitions and scope items to ensure clarity of expectations. • Update liquidated damages clause for accuracy in section references <p>** Updates were negotiated in consultation with CPO</p>	
<p>14. If the amendment involves a change in Scope, describe efforts to identify reasonable, competitive, procurement alternatives to amending the contract.</p> <p>Securing another vendor to administer the state assessment program for the 2018-19 school year would not be a feasible alternative, as the yearly assessment cycle is already well under way. Tennessee's state assessment program fulfills a variety of requirements of state and federal law, including many requirements within TCA 49-1 and Title 1 Part A of the federal Every Student Succeeds Act. The upcoming request for proposals will result in a competitive process for the procurement of these services for future years.</p>	
<p>Signature of Agency head or authorized designee, title of signatory, and date (the authorized designee may sign his or her own name if indicated on the Signature Certification and Authorization document)</p>	



STS Pre-Approval Endorsement Request E-Mail Transmittal

TO : STS Contracts
Department of Finance & Administration
E-mail : it.abc@tn.gov

FROM : Cliff Lloyd
E-mail : cliff.lloyd@tn.gov

DATE : 9/6/18

RE : Request for STS Pre-Approval Endorsement

Applicable RFS # 33111-01816

State Security Confidential Information Applicability

Under Tenn. Code Ann. §10-7-504(i) vendor identity or a description of the goods or services provided by the vendor shall be confidential.

X Applicable

Not Applicable

STS Endorsement Signature & Date:

Chief Information Officer

NOTE: Proposed contract/grant support is applicable to the subject IT service technical merit.

Strategic Technology Solutions (STS) pre-approval endorsement is required pursuant to procurement regulations pertaining to contracts with information technology as a component of the scope of service. This request seeks to ensure that STS is aware of and has an opportunity to review the procurement detailed below and in the attached document(s). This requirement applies to any procurement method regardless of dollar amount.

Please indicate STS endorsement of the described procurement (with the appropriate signature above), and return this document via e-mail at your earliest convenience.

Contracting Agency	TN Dept. of Education
Agency Contact (name, phone, e-mail)	Cliff Lloyd, 615-626-0020, cliff.lloyd@tn.gov

Applicable RFS # 33111-01816

Attachments Supporting Request (mark all applicable)

Note: The complete draft procurement document and the applicable documents listed below must accompany this request when submitted to STS. Special Contract Requests and Amendment Requests without Agency Head signature are acceptable. STS is aware that these documents will not have CPO signature when submitted with this request.

- Solicitation Document
- Special Contract Request
- Amendment Request
- Proposed Contract/Grant or Amendment
- Original Contract/Grant and Previous Amendments (if any)

Information Systems Plan (ISP) Project Applicability

To avoid delay of STS pre-approval, the applicability of an ISP project to the procurement must be confirmed with agency IT staff prior to submitting this request to STS. If necessary, agency IT staff should contact STS Planning with questions concerning the need for an ISP project.

IT Director/Staff Name Confirming (required):

- Applicable – Approved ISP Project#
- Not Applicable

Subject Information Technology Service Description

Provide a brief summary of the information technology services involved. Clearly identify included technologies such as system development/maintenance, security, networking, *etc.* As applicable, identify the contract or solicitation sections related to the IT services.

Amendment to state assessment contract, which includes provision of online assessment.

**CONTRACT**

(fee-for-goods or services contract with an individual, business, non-profit, or governmental entity of another state)

Begin Date July 13, 2016	End Date November 30, 2018	Agency Tracking # 33111-01816	Edison Record ID 50753		
Contractor Legal Entity Name Questar Assessment, Inc.				Edison Vendor ID 196257	
Goods or Services Caption (one line only) State Summative Assessments					
Contractor <input checked="" type="checkbox"/> Contractor		CFDA # 84.369, 84.027			
Funding					
FY	State	Federal	Interdepartmental	Other	TOTAL Contract Amount
2017	\$23,887,500.00	\$6,112,500.00	\$0.00	\$0.00	\$30,000,000.00
2018	\$23,887,500.00	\$6,112,500.00	\$0.00	\$0.00	\$30,000,000.00
2019	\$23,887,500.00	\$6,112,500.00	\$0.00	\$0.00	\$30,000,000.00
2020	\$23,887,500.00	\$6,112,500.00	\$0.00	\$0.00	\$30,000,000.00
2021	\$23,887,500.00	\$6,112,500.00	\$0.00	\$0.00	\$30,000,000.00
TOTAL:	\$119,437,500.00	\$30,562,500.00	\$0.00	\$0.00	\$150,000,000.00
Contractor Ownership Characteristics:					
<input type="checkbox"/> Minority Business Enterprise (MBE): African American, Asian American, Hispanic American, Native American					
<input type="checkbox"/> Woman Business Enterprise (WBE)					
<input type="checkbox"/> Tennessee Service Disabled Veteran Enterprise (SDVBE)					
<input type="checkbox"/> Tennessee Small Business Enterprise (SBE): \$10,000,000.00 averaged over a three (3) year period or employs no more than ninety-nine (99) employees.					
<input checked="" type="checkbox"/> Other:					
Selection Method & Process Summary (mark the correct response to confirm the associated summary)					
<input checked="" type="checkbox"/> Competitive Selection			RFP		
<input type="checkbox"/> Other					
Budget Officer Confirmation: There is a balance in the appropriation from which obligations hereunder are required to be paid that is not already encumbered to pay other obligations.					
Chris Foley		Digitally signed by Chris Foley DN: cn=Chris Foley, o=Tenn Dept of Education, ou=OCFO, email=chris.foley@tn.gov, c=US Date: 2016.07.06 14:36:22 -05'00'			
Speed Chart (optional) Various		Account Code (optional) Various			



S U P P L E M E N T A L S U M M A R Y S H E E T

Number		33111-01816						
Edison ID		50753						
Fiscal Year	Department ID	Speedchart Number	Program Code	Account Code	Fund	Project/ Grant Code	CFDA #	Amount
2017	3311101000	ED00001147	873600	70803000	25000	n/a	n/a	\$23,887,500.00
2017	3311101000	ED00001076	847500	70803000	25000	EDESEAASG17ADM N	84.369	16,750.00
2017	3311101000	ED00001076	847500	70899000	25000	EDESEAASG17ADM N	84.369	\$4,095,750.00
2017	3313600000	ED00001020	644400	70803000	25000	ED0000LL16ACX16	84.027	\$8,250.00
2017	3313600000	ED00001020	644400	70899000	25000	ED0000LL16ACX16	84.027	\$1,991,750.00
2018	3311101000	ED00001147	873600	70803000	25000	n/a	n/a	\$23,887,500.00
2018	3311101000	ED00001076	847500	70803000	25000	EDESEAASG17ADM N	84.369	\$16,750.00
2018	3311101000	ED00001076	847500	70899000	25000	EDESEAASG17ADM N	84.369	\$4,095,750.00
2018	3313600000	ED00001097	644400	70803000	25000	EDIDEA61117DISC	84.027	\$8,250.00
2018	3313600000	ED00001097	644400	70899000	25000	EDIDEA61117DISC	84.027	\$1,991,750.00
2019	3311101000	ED00001147	873600	70803000	25000	n/a	n/a	\$23,887,500.00
2019	3311101000	ED00001076	847500	70803000	25000	EDESEAASGxxADM N	84.369	\$16,750.00
2019	3311101000	ED00001076	847500	70899000	25000	EDESEAASGxxADM N	84.369	\$4,095,750.00
2019	3313600000	ED00001097	644400	70803000	25000	EDIDEA61117DISC	84.027	\$8,250.00
2019	3313600000	ED00001097	644400	70899000	25000	EDIDEA61117DISC	84.027	\$1,991,750.00
2020	3311101000	ED00001147	873600	70803000	25000	n/a	n/a	\$23,887,500.00
2020	3311101000	ED00001076	847500	70803000	25000	EDESEAASGxxADM N	84.369	\$16,750.00
2020	3311101000	ED00001076	847500	70899000	25000	EDESEAASGxxADM N	84.369	\$4,095,750.00
2020	3313600000	ED00001097	644400	70803000	25000	EDIDEA61117DISC	84.027	\$8,250.00
2020	3313600000	ED00001097	644400	70899000	25000	EDIDEA61117DISC	84.027	\$1,991,750.00
2021	3311101000	ED00001147	873600	70803000	25000	n/a	n/a	\$23,887,500.00



21	3311101000	ED00001076	847500	70803000	25000	EDESEAASGxxADM N	84.369	\$16,750.00
2021	3311101000	ED00001076	847500	70899000	25000	EDESEAASGxxADM N	84.369	\$4,095,750.00
2021	3313600000	ED00001097	644400	70803000	25000	EDIDEA61117DISC	84.027	\$8,250.00
2021	3313600000	ED00001097	644400	70899000	25000	EDIDEA61117DISC	84.027	\$1,991,750.00
TOTAL								\$150,000,000.00



**CONTRACT
BETWEEN THE STATE OF TENNESSEE,
DEPARTMENT OF EDUCATION
AND
QUESTAR ASSESSMENT, INC.**

This Contract, by and between the State of Tennessee, Department of Education ("State") and Questar Assessment, Inc. ("Contractor"), is for the provision of State Summative Assessments, as further defined in the "SCOPE." State and Contractor may be referred to individually as a "Party" or collectively as the "Parties" to this Contract.

The Contractor is a For-Profit Corporation.

Contractor Place of Incorporation or Organization: Minnesota

Contractor Edison Registration ID # 0000196257

A. SCOPE:

- A.1. The Contractor shall provide all goods or services and deliverables as required, described, and detailed below and shall meet all service and delivery timelines as specified by this Contract.
- A.2. Definitions
- a. Accessibility Features– Test administration modifications allowable for use with any student. Modifications may include: flexible setting or scheduling; visual, tactile, or auditory aids; scribe; marking in test books; adjustments to background or contrast colors for computer-based testing; and enlarged print online. Individualized Education Plan (IEP) and/or 504 plan documentation is not necessary.
 - b. Accommodations – Changes in the assessment materials or procedures that do not change the construct being measured that are specified by IEP and/or 504 service plan documentation. These may include Braille, ability for the student to dictate responses, an administrator providing prompting upon request and additional time.
 - c. Administration–Window in which an assessment is given. English language arts and social studies are given in two parts with separate administration windows for all grade levels. The secondary course exams are given in fall and spring; grade 3-8 and the alternative exams are given in the spring as outlined in Contract section A.3.e.
 - d. Analytic Writing – Writing that explores a central idea based on a text(s) and a student's engagement with that text. Analytic Writing will explore the text, provide evidence to support the student's opinion and present a logical integration and framing of concepts to advance an argument or convey an idea.
 - e. Analytical Services – Services provided by the Contractor to ensure the technical soundness of assessments. Such services may include the selection of representative samples of Tennessee students, conducting pilot studies, scaling of items and test forms, scale/item parameter drift studies, item bias/differential item functioning (DIF) analysis, setting of performance standards, and demonstration of test reliability and validity.
 - f. Anchor Papers – Sample essays which clearly exhibit the criteria for each score point.
 - g. Anchor Text – The primary text used in items that may have more than one text. This text provides the overall theme of the item.
 - h. Assessment – An evaluation of student achievement related to knowledge and skills in a specific content area and/or a specific grade level. Term used throughout this Contract to denote any test given under this Contract to include paper and/or online versions of both selected and constructed response item types at all grade levels and content areas.
 - i. Blind Responses – A method of preparing student responses in which student demographic data and scores are separated in order to render the responses unidentifiable by any student demographic characteristic, prior to scoring.
 - j. Blind Scoring – A method of scoring that allows each student response to be scored



independently, without the reader having knowledge of any previous scores.

- k. Calibration – Placing items on a common scale so that items measuring the same underlying content represent a position on the scale that is also represented by other items of comparable difficulty.
- l. Cloud – Computing resources such as storage and computational capacity that are provided by a third party for a service fee and which are available on demand using an internet connection without the deployment or provisioning of physical computers.
- m. Comparability and Equating – Statistical evidence that the assessment is similar in content and psychometric characteristics to the current assessment.
- n. Constructed Response (CR) – Assessment items that require a student to produce a response without options provided. This may include items in which a student provides a brief response to a posed question; completes a computation; creates a graphic representation; provides justification/explanation of his/her thoughts or work on an equation or formula; a response to a text-based prompt that can vary in length and text complexity based on grade level; or activities that are related and require students to construct a response, create a product, or perform a demonstration which are evaluated by a set of criteria.
- o. Content Areas – English language arts, mathematics, science and social studies in grades 3-8 and secondary courses in English I, II, III; Algebra I, II; Geometry; Integrated Math I, II, III; Biology; Chemistry; and U.S. History..
- p. Content Delivery Network (CDN) – An array of strategically placed, interconnected data storage devices used to serve up large volumes of content more efficiently than single storage instances by leveraging proximity of the customer to each node in the CDN.
- q. Criterion-Referenced Test (CRT) – An assessment aligned to pre-defined content standards and designed to measure student achievement relative to those standards.
- r. Cut-Score – The minimum test score necessary to demonstrate that a test taker has the knowledge and/or skills to perform at a certain level of achievement.
- s. Developmental Appropriateness – Policy and procedures adopted by the American Psychological Association used to ensure that the assessment development process gives careful consideration to the age and academic progress of students.
- t. Education Agency (EA) – Term used to collectively refer to all Tennessee public local education agencies (LEAs), charter schools, State Special Schools, the Achievement School District as defined in T.C.A. § 49-1-614, Department of Children’s Services schools, and approved private schools.
- u. EdTools – A State-owned online platform used for assessment logistics services including communications, calendar management, materials management, processing activities, reporting and resources. Processing activities includes reports of irregularity, school group lists (used for shipping bill of lading), student demographic data verification, and teacher linkages.
- v. English Learner (EL) – A student whose first language is not English and who is limited English proficient as determined by State criteria. Historically referred to as Limited English Proficiency (LEP).
- w. English Learner Accommodations – Testing accommodations allowable for EL or non-English language background (NELB) students based on individual needs and abilities.
- x. EOC – End of Course Assessments provided in specified secondary content areas.
- y. Evidence Centered Design (ECD) – A framework for assessment design that takes into account:
 - (1) the knowledge, skills, abilities to be assessed,
 - (2) the behaviors or performances that should reveal the target construct, and
 - (3) the tasks that should elicit these behaviors.



- z. Fault Tolerance – The Contractor’s ability to maintain continuity of computer-based testing platform in the event of the failure of one or more of its components.
- aa. Fiscal Year (FY) - The State accounting period of July 1 through June 30.
- bb. Hand Scoring – The process of determining the rating of a student’s work using trait based scoring rubrics for essays and scoring guidelines for mathematics.
- cc. Interoperability – A principle of using standardized data formats and data transport protocols to promote the effective exchange and utilization of data between two or more systems or system components. Interoperability is a core design principle for State technology development and operations.
- dd. Item(s) – Test questions, which may include constructed response, performance tasks and/or selected response.
- ee. Item Bank – Test question repository and/or archive.
- ff. Limited English Proficient (LEP) Student – A student whose first language is not English and who is limited in English proficiency as determined by State criteria (also referred to as English learners).
- gg. Linking Items - Items that have known psychometric properties and are common across forms for the purpose of equating assessments.
- hh. Local Education Agency (LEA) – A public school district or school system that is the financial and administrative agency for school(s) in a certain region of the state.
- ii. N-Count – Total number of students, items, materials or other deliverables.
- jj. Online Applications – Web-based products as defined in Contract sections A.8.c & f.(1), A.9.c, A.11.c, and A.14.f-g. Three functional applications are provided that cover computer based testing (including practice tools and enrollment/pre-id); materials management (inventory); and, reporting.
- kk. Performance Standards – Indicate student performance and are reported at multiple levels. The performance standards are established by educators at standards setting.
- ll. Prompt – Text that defines the topic for a student’s writing. The different modes of writing assessed may include: narrative, expository, informational, explanatory, analytic, opinion, and/or argument.
- mm. Quality of Services (QoS) – A process whereby specific bandwidth capacity on a network is reserved exclusively for high priority processes that need to be protected from excessive bandwidth consumption elsewhere in the network.
- nn. Question and Test Interoperability (QTI) – Defines a standard format for the representation of assessment content and results, supporting the exchange of this material between authoring and delivery systems, repositories and other learning management systems. It allows assessment materials to be authored and delivered on multiple systems interchangeably. It is designed to facilitate interoperability between systems.
- oo. Scale Score - A numerical score, based upon the number of items a student correctly answers, which summarizes the overall level of performance attained by the student.
- pp. Scientific validity and empirical standards –The assessments shall meet the criteria for test development, administration, and use described in the *Standards for Educational and Psychological Testing* (1999) adopted by the American Educational Research Association (AERA), the American Psychological Association (APA), and the National Council on Measurement in Education (NCME).
- qq. Selected Response (SR) – A test question that requires the student to choose the correct/best answer(s) from possible responses (i.e., multiple choice, multiple select, technology enhanced, drag and drop, hot text, etc.).
- rr. Secure Browser – A program specifically created to allow the delivery of a "locked-down" testing environment for web delivered computer-based tests. A Secure Browser will prevent



students from accessing other computers, Internet applications or copying test information, creating a safe test environment.

- ss. Software as a Service (SaaS) – A software procurement model where the customer pays a fee to use the capability of a software product that has been deployed by a third party and made available on demand as opposed to purchasing the software itself.
- tt. Standards Alignment – The degree to which the assessment is aligned with Tennessee Academic Standards. Alignment shall be defined as the quality of the relationship between learning expectations and the assessment used to measure student comprehension of the concepts taught.
- uu. Standards and Assessment Peer Review – Specific federal compliance requirements issued by the Office of Student Achievement and School Accountability of the U.S. Department of Education for the appropriateness of assessments used by states.
- vv. State Assigned Student ID Number – Student identification number randomly generated from the statewide student management system.
- ww. State Special Schools – A school that is managed by the State. Summary data for State Special Schools is included with public schools. Current schools include: Alvin C. York Institute, Tennessee School for the Blind, Tennessee School for the Deaf, and West Tennessee School for the Deaf.
- xx. Sub-score Categories - Divisions of the academic standards used in reporting student performance on the assessments.
- yy. Technical Advisory Committee (TAC) – A panel comprised of 6 – 10 recognized experts in the field of large scale assessment. These individuals are secured by the Contractor on behalf of the State to provide consultation and guidance toward the implementation of a valid and reliable standardized assessment program.
- zz. Tennessee Code Annotated (T.C.A.) – The compilation of State statutes.
- aaa. Tennessee Comprehensive Assessment Program (TCAP) –The comprehensive set of standardized assessments mandated in Tennessee.
- bbb. TCAP Assessments – Used to identify all State assessments as a group.
- ccc. TCAP/ACH – Achievement assessment mandatory for grades 3-8.
- ddd. TCAP/Alt – Alternative assessment for most significantly disabled students (1%).
- eee. TN Constructed Response Rubrics – Scales to be established by the Contractor with State assistance for use in scoring constructed response items in a fair, reliable and valid manner.
- fff. Technical Report – Comprehensive summary report as defined in Contract section A.7.aa.
- ggg. Technology Enhanced Item (TEI) – Computer delivered items that include specialized interactions for collecting response data. A TEI template describes a single interaction, response data collected as a result of that interaction, and the logic applied to score the response data.
- hhh. Tennessee Academic Standards - A set of expectations for what students will know and be able to do at the end of a grade. Tennessee Academic Standards as adopted by the State Board of Education.
- iii. Tennessee Value-Added Assessment System (TVAAS) - One component of the State accountability program that utilizes a statistical methodology to measure student achievement gains.
- jii. Test Year (TY) - The test administration period from July 1 through June 30. Final reporting for the test year may extend into the following test year.
- kkk. Universal Design – A set of principles for curriculum development that give all individuals equal opportunities to learn. Universal Design provides a blueprint for creating instructional goals, methods, materials, and assessments that work for everyone – not a



single, one-size-fits-all solution – but rather flexible approaches that can be customized and adjusted for individual needs. All items must be written and will be reviewed under these principles.

- III. Validity and Reliability Requirements – Statistical and psychometrical evidence that the assessments consistently measure the standards and determine an achievement level as defined by established performance standards.
- mmm. Vertical Scaling – Development of a single scale appropriate for use across grade levels to determine growth in each domain.
- nmm. Web-Based – Delivered via the Internet or World Wide Web.

A.3. General Scope of Assessment Services

The Contractor shall partner with the State in the development, administration, scoring and reporting of the Tennessee Comprehensive Assessment Program (TCAP), which are Criterion-Referenced Tests (CRT) aligned to the Tennessee Academic Standards. The Contractor shall write test items and develop forms for English language arts (ELA) and mathematics in grades 3-11. The Contractor shall complete scoring, reporting, and administration for ELA, mathematics, science and social studies in grades 3-11. The Contractor shall develop, implement, and maintain assessments required under the Title I requirements of the Every Student Succeeds Act of 2015 (ESSA), the Individuals with Disabilities Education Act (IDEA), and Tennessee law and administrative regulations. All deliverables shall be provided to the State for review and written approval according to timelines established in the schedule in Contract section A.4 and the annual Work Plan defined in Contract section A.4.a(1). Unless otherwise indicated, all requirements of this Contract shall apply to all assessments. The quantity of deliverables for each assessment shall meet all service and delivery timelines specified in Contract section A.4 or elsewhere in this Contract and shall be approved by the State.

- a. The assessments in the TCAP must be aligned with Tennessee Academic Standards as defined in Contract section A.2.mmm and must incorporate Tennessee educators in development and scoring activities. The State may use existing items and/or test forms that are owned by the Contractor and leased to the State, items that are leased from other state item banks, or work with the Contractor to develop new items and/or test forms that are owned by either the Contractor or the State.
- b. Test Structure – The Contractor shall work with the State to provide the following assessments:
 - (1) TCAP/ACH (achievement assessment) is required for grades 3-8, using Tennessee Academic Standards in English language arts, mathematics, science and social studies.
 - (2) End of Course assessments are required for specified secondary content areas including: Algebra I and II; Biology; Chemistry; English I, II, and III; Geometry; Integrated Math I, II, and III; and U.S. History.
 - (3) Assessments in English language arts and social studies shall be given in two parts and include field testing in one or both parts. The first part, Part I, is constructed response and shall be a performance based assessment of student cognitive skills and content knowledge. Part I shall be developed through a multi-step joint approval process between the Contractor and the State. The Contractor shall work with the State to write and/or acquire constructed response items, develop test forms and distribute to EAs for administration. Part I shall be scored using blind scoring methods as detailed in Contract section A.13.d-e and a rubric developed by the Contractor in collaboration with the State. Part II will include various item types, such as multiple select, technology-enhanced, multiple step, etc. These item types should be machine scoreable. Part I and/or Part II may have one to two subtests each.
 - (4) Assessments in mathematics and science shall be given in one part and may have two or three subtests with field test items spiraled throughout each subtest. The Contractor shall work with the State to write and/or acquire constructed response items to be included in at



least one subtest for mathematics. Mathematics constructed response items should be machine scoreable.

- (5) Alternative Assessment: The Contractor shall be responsible for the administration, scoring, and reporting of the social studies and science alternate assessment (TCAP/Alt), given to students in grades 3-11. The TCAP/Alt is an alternate assessment based on alternate achievement standards for students with significant cognitive disabilities in the areas of science for grades 3-8 and 10 and for social studies in grades 3-8 and 11. This assessment does not include the ELA or mathematics content areas. The TCAP/Alt has been developed by the State's item and test form development vendor in collaboration with the State using the principles of ECD. The goal of the alternative assessment is to ensure that students with significant cognitive disabilities achieve increasingly higher academic outcomes and leave high school ready for post-secondary options.
 - (6) The assessments shall be valid, reliable and fair measurements of college- and career- readiness for all students. The State's assessment program shall be designed to be accessible for use by the widest possible range of students, including students with disabilities and students with limited English proficiency.
 - (7) All activities related to this Contract and as detailed in the annual Work Plan will be the responsibility of the Contractor and will require the State's written approval. All components of the assessment program shall maintain compliance with current State Board of Education policies and the laws of Tennessee. The Contractor shall provide documentation of the components of the assessment program as requested by the State.
 - (8) The Contractor shall ensure all assessments adhere to existing or future changes to federal or state legislation, rules and/or policies. The Contractor shall provide any requested documentation as evidence of statutory and regulatory compliance. Such work shall include any documents, papers, or records requested by the State or the United States Department of Education for review and audit purposes.
- c. Test Administration Format – The Contractor shall provide all assessments via paper-based administration for the duration of the contract. The Contractor shall provide a computer-based testing (CBT) platform for practice tests and online practice tool in 2016-2017 and for the duration of the contract period. The State will transition to computer-based assessment for operational tests through a phased-in approach. The Contractor shall work with the State to successfully complete any pilots, stress tests, or other pre-conditions to ensure a successful transition in advance of launching computer-based assessment administration for operational tests in 2016-2017 or any subsequent school year during the contract period. (See Contract section A.10.a-c. for more information on requirements for computer-based testing phase-in.) The timelines and deliverables for any transition to computer-based testing shall be included in the Contractor's annual Work Plan, as appropriate, and developed in consultation with the State.
 - d. The primary purpose of these assessments is to improve teaching and learning. The Contractor shall work in collaboration with the State and the State's item and test form development vendor to ensure that high quality items as defined in Contract section A.6.h. and test forms are provided to meet this purpose. Additionally, these assessment results may be used for student grades, school accountability, and teacher evaluation metrics, including the Tennessee Value-added Assessment System (TVAAS).
 - e. State will work with the Contractor in development of annual testing schedules. Subject to change by the State, currently the proposed TCAP schedule is as follows:

Assessment Name	Administration	2016-17 Administration Window	
Traditional Schedules ELA & Social Studies Grades 3-8 and Secondary	Spring – Part I	February 6 – March 3	
		PAPER	February 20 – March 3
	Spring – Part II	April 17 – May 12	



Assessment Name	Administration	2016-17 Administration Window		
		PAPER	April 24 – May 5	
<u>Block Schedules</u> ELA & Social Studies Grades 3-8 and Secondary	Fall	Part I	October 31 – November 18	
		Part II	November 28 – December 16	
	Spring	Part I	April 10 – April 28	
		Part II	April 24 – May 12	
			PAPER	November 28 – December 16
			PAPER	April 24 – May 5
Math & Science Grades 3-8 and Secondary	Fall Block	November 28 – December 16		
	3-8 & Traditional	April 24 – May 5 (FRI)		
	Spring Block	April 24 – May 9 (TUE)		
2 nd grade*	Spring	April 24 – May 5		
TCAP-Alt** (MSAA)	Spring	TBD		
ACT	Spring	March 21 April 19 (make-up)		
ACT Explore, PLAN	Fall	TBD		
ACCESS for English learners (EL)	Spring	March 6 – April 7		
NAEP	Winter/Spring	January 30 – March 10		

- f. The Contractor will provide testing materials based upon the number of students tested in each system. Historical usage figures are provided in the following table:

Assessment	2015-2016
End of Course – Fall Part I (included Math)	96,418
End of Course – Fall Part II (included Science)	131,180
End of Course – Fall Braille	5
Achievement grades 3-8	486,757
Large Print grades 3-8	1911
Braille grades 3-8	39
End of Course – spring	555,743
End of Course – spring Large Print (LP)	435
End of Course – Braille	61

- g. The Contractor shall be responsible for review of 2015-2016 school year item statistics of operational and field test items and form development for 2016-2017.



- h. Science assessments are a single administration that includes only multiple-choice items that are machine-scored. Science standards are under review and the State's current plans include field testing new items in spring 2018 for operational assessments in 2018-2019 school year. The Contractor shall work with the State and the State's item and test form development vendor to include constructed response items in new science assessments.
- i. The Contractor shall provide reporting on assessments provided under this Contract that includes performance levels established to provide a measure of student work on all secondary content area assessments, reflecting the expectation that a student could succeed in credit bearing, entry level coursework in college.
- j. Items provided under this Contract shall include both selected and constructed response items and shall be aligned with the Tennessee Academic Standards and meet federal assessment criteria. The Contractor shall receive State approval of each passage, item, test form, and other materials used under this Contract.
- k. The Contractor shall provide assessment services to all Tennessee EAs. Tennessee has approximately 142 LEAs, four State Special Schools, the State Achievement School District, and approximately 1,700 schools. Each grade cohort of students is approximately 70,000 statewide.

A.4. Schedule

The State reserves the right to determine specific details of work tasks and products. Changes to any agreed upon procedures or product specifications shall be made in collaboration with the State and the Contractor will submit a revised annual Work Plan for State approval. The Contractor shall not disseminate any written information, materials, or deliverables associated with this Contract to the field, public, or any other third party without the State's written approval. The Contractor will allow the State a minimum of five (5) State business days to review materials and deliverables unless noted otherwise in this scope of services. The Contractor shall make modifications as directed by the State and provide additional time of not less than three (3) State business days for the State to review and sign-off on the revised submission. The Contractor is responsible for any expenses associated with making modifications to materials and deliverables necessary to obtain the State's approval. All administrative materials shall be provided to the State in Microsoft Word and/or Excel for use on the State internet or in training. The Contractor shall provide the deliverables under this Contract in accordance with the delivery schedule stated below:

a. Annual Deliverables.

These deliverables shall be completed on the dates specified below for the first administration of the assessments. The due dates for subsequent administrations will be established in the annual Work Plan and must be approved by the State. Any revisions to the due dates for administration and related activities must be reflected in an update to annual Work Plan and submitted to the State for approval within 48 hours of the change.

- (1) Annual Work Plan – The Contractor shall prepare, for State review and approval, a detailed Work Plan that incorporates the schedules for the activities of this Contract. Two separate work plans shall be provided for the TCAP Achievement/EOC and the TCAP/Alt (alternative assessments). The annual Work Plan will include all activities related to each test administration and be submitted 10 days after the Contract is executed and by May 1 thereafter. The initial annual Work Plan shall cover the period from the execution of the Contract through June 30, 2017. The last annual Work Plan (due May 1, 2017) shall cover the period from July 1, 2017 through the end of the Contract on November 30, 2018.

The annual Work Plan will indicate the essential steps leading to the transition between the Contractor and the existing vendor. The annual Work Plan shall include the steps for all project work tasks and deliverables including initiation and completion dates, task responsibilities and transitional activities with the State and State designated vendors to avoid any disruption of services, requirements or deliverables to the students, teachers, schools, EAs, and State.

The annual Work Plan must describe all activities related to item development, form



development, administration materials, vendor support processes, assessment support processes, scoring, reports, interpretation materials and logistics, including each stage of production. It shall provide due dates for each activity and indicate areas of responsibility for the Contractor and the State. The annual Work Plan will serve as a monitoring document to be used by the State to assure timely completion of tasks as scheduled. Each annual Work Plan shall be comprised of all activities related to the administrations of each assessment and must be kept current as dates are revised. All revisions to the annual Work Plan and deliverable due dates must be submitted for State approval within 48 hours.

The annual Work Plan will indicate the essential steps leading to the transition between the Contractor and any vendor awarded any subsequent contract for the provision of these services and the steps for all project work tasks and deliverables including initiation and completion dates, and task responsibilities to avoid any disruption of services, requirements or deliverables to the students, teachers, schools, EAs, and State.

The Contractor shall establish a secure SharePoint or secure file transfer protocol (SFTP) website for use in maintaining the annual Work Plan and other communications, including posting administrative materials, scoring materials and reporting information for review, with the State and any State vendors for contract management. Materials shall be considered delivered and final after written notification is given to the Contractor via email or other electronic methods by the State contact in Contract section D.2 or their official designee. The annual Work Plan shall be delivered in Microsoft Project or other format supported by the State, shall include a key dates file in Microsoft Excel and shall be maintained as a fluid, ongoing project document for the length of the Contract. Both the State and the Contractor shall have access to and the ability to edit and update the annual Work Plan as needed. All changes shall be made in collaboration with the State. The Contractor shall review the annual Work Plan on a weekly basis, at a minimum, to determine any adjustments, identify risks to project execution, and communicate potential options to mitigate identified risk.

The Contractor shall provide the facility, transportation, food, and lodging for an annual Work Plan review meeting for planning, materials development, scoring methodology, processing data transfers and report approval. Attendees shall include representatives of the Contractor, State, the State's item and test form development vendor for science and social studies, and the State's technology vendor. The State's technology vendor provides programming and support for the EdTools platform which is used for assessment logistics processes. State representatives in consultation with the Contractor shall make selection of the meeting site and dates. Meeting participants shall include the key project staff including project coordinators and their supervisors from all organizations. The Contractor shall pay for all costs, described in Contract section A.5.d(1), related to the annual Work Plan review

- (2) Quality control procedures as detailed in Contract section A.5.e to be incorporated into the final annual Work Plan.
- (3) Content/Bias Passage Reviews – Conducted for the State during a mutually agreement timeframe, but completed no later than November 1, 2016. Subsequent reviews may be conducted earlier in the year such as December or February.
- (4) Content/Bias Item Reviews – Conducted for the State during a mutually agreeable timeframe, but completed no later than November 1, 2016. Subsequent reviews may be conducted earlier in the year such as February or early March.
- (5) Order Entry for fall block using the State's EdTools platform – August 22 – September 2, 2016 with delivery of the n-counts for printing by the State's technology vendor via web services to the Contractor on September 6, 2016.
- (6) Online item tool, sampler and practice tests applications as defined in Contract section A.8.c shall be provided to the State, based on a mutually agreed-upon date, during the 2016-2017 school year. Paper- or computer-based practice tests (if



applicable) will be available no later than November 1, 2016.

- (7) Technical Support Services – Technical support services for online item tool, sampler and practice tests as detailed in Contract sections A.8.c shall be provided to the State at a mutually agreed upon date. Additional support services for online applications including computer based testing A.8.f, inventory management A.9.c, enrollment A.11.c and reporting A.14.f-g shall become available as each application becomes available.
- (8) Initial enrollment upload for pre-id as defined in Contract section A.11.c on September 20, 2016.
- (9) Test Specifications – Receipt of Test Specifications for fall block as defined in Contract section A.6.d-e, including Item Specifications and Scoring Keys by September 23, 2016.
- (10) Progress Reports – Quarterly progress reports as detailed in Contract section A.5.d shall be provided to the State beginning October 14, 2016, covering the preceding three-month period.
- (11) Order Entry for spring testing using the State's EdTools platform– October 17-28, 2016 with delivery of the n-counts for printing by the State's technology vendor via web services to the Contractor on November 1, 2016.
- (12) Test Administration Materials – Receipt of test administration materials as detailed in Contract section A.8.e by October 21, 2016 for Part I of fall block assessments.
- (13) Assessment Materials– Receipt of all assessment materials as detailed in Contract section A.8.f by EAs by October 21, 2016 for Part I of fall block assessments.
- (14) Processing and Scoring Activities –End to end data integration testing with the State's technology vendor shall be completed by November 11, 2016 for fall block assessments. Specific dates for component deliverables of processing and scoring as detailed in Contract sections A.12 and A.13 shall be defined during the initial planning meeting detailed in the annual Work Plan. Any revisions to the due dates must be reflected in an update to annual Work Plan and submitted to the State for approval within 48 hours of the change.
- (15) Test Administration Materials – Receipt of test administration materials as detailed in Contract section A.8.e by November 11, 2016 for Part II of fall block assessments.
- (16) Assessment Materials– Receipt of all assessment materials as detailed in Contract section A.8.f by EAs by November 11, 2016 for Part II of fall block assessments.
- (17) Data transmission of fall block post-edit data with score information to the State's technology vendor for the production of Quick Scores to begin on approximately December 8, 2016.
- (18) Test Specifications – Receipt of Test Specifications for spring Part I testing as defined in Contract section A.6.d-e, including Item Specifications and Scoring Keys by December 16, 2016.
- (19) Test Administration Materials – Receipt of test administration materials as detailed in Contract section A.8.e by January 20, 2017 for Part I of spring traditional assessments.
- (20) Assessment Materials– Receipt of all assessment materials as detailed in Contract section A.8.f by EAs by January 20, 2017 for Part I of spring traditional assessments.
- (21) Guide to Test Interpretation (GTI) – Receipt of electronic GTI for web posting by February 17, 2017 for fall block.
- (22) Parent Brochures - Delivered with student level reports to EAs by February 24, 2017 for fall block.
- (23) Student Labels and Score Reports – Receipt by EAs (with parent brochures) by February 24, 2017 for fall block.



- (24) Online Reporting Activities – Online reporting programming as detailed in Contract section A.14 shall be provided to the State by February 24, 2017 for fall block.
 - (25) Comprehensive Data Files (CDF) – Receipt of CDF for by the State for fall block by March 3, 2017.
 - (26) Processing and Scoring Activities – End to end data integration testing with the State's technology vendor shall be completed by March 17, 2017 for spring assessments. Specific dates for component deliverables of processing and scoring as detailed in Contract sections A.12 and A.13 shall be defined during the initial planning meeting detailed in the annual Work Plan. Any revisions to the due dates must be reflected in an update to annual Work Plan and submitted to the State for approval within 48 hours of the change.
 - (27) Test Administration Materials – Receipt of test administration materials as detailed in Contract section A.8.e. by March 24, 2017 for Part I of spring block assessments.
 - (28) Assessment Materials– Receipt of all assessment materials as detailed in Contract section A.8.f by EAs by March 24, 2017 for Part I of spring block assessments.
 - (29) Test Administration Materials – Receipt of test administration materials as detailed in Contract section A.8.e. by April 7, 2017 for Part II of spring block and traditional assessments.
 - (30) Assessment Materials– Receipt of all assessment materials as detailed in Contract section A.8.f by EAs by April 7, 2017 for Part II of spring block and traditional assessments.
 - (31) Data transmission of fall block post-edit data with score information to the State's technology vendor for the production of Quick Scores to begin on approximately May 4, 2017.
 - (32) Guide to Test Interpretation (GTI) – Receipt of electronic GTI for web posting by May 26, 2017.
 - (33) Comprehensive Data Files – Receipt of CDF for by the State by May 30, 2017 and no later than May 30th for each subsequent year of the contract.
 - (34) Parent Brochures - Delivered with student level reports to EAs by June 16, 2017.
 - (35) Student Labels and Score Reports – Receipt by EAs (with parent brochures) by June 16, 2017.
 - (36) Online Reporting Activities – Online reporting programming as detailed in Contract section A.14 shall be provided to the State by June 16, 2017.
 - (37) Sight Reviews – Conducted for the State as needed for new Braille development.
 - (38) Braille Reviews – Conducted for the State as needed for new Braille development.
 - (39) Technical Report – Receipt of Technical Report by the State by October 1, 2017.
- b. One time deliverables:
- (1) Standard Setting – TCAP in grades 3-8 ELA, math and social studies conducted for the State during the month of July 2017.
 - (2) Comparability Study – Receipt of study as defined in Contract section A.7.kk to the State by October 1, 2017.
 - (3) TCAP Alignment Study – Receipt of alignment study as defined in Contract section A.6.g by October 1, 2018.
 - (4) Shipment of Test Archive Documents – Receipt of all archived documents by the contract end date, see Contract section A.9.e.
- c. The State shall provide the following by 30 days after the contract is executed.
- (1) All technical details as defined in Contract section A.10.



- (2) Tennessee item writing style guide and test blueprints
- (3) All item bank information.
- (4) Contact information, including email, for System and School users of online products.
- (5) Shipping information for all reports.

A.5. Operations Management

- a. Project Team – The Contractor shall assign a single point of contact for this assessment program to manage all inquiries related to materials, training, and technical assistance. The point of contact program manager should have Project Management Professional (PMP) certification.
 - (1) Team members must have at a minimum technical experience, knowledge, and operational experience including the following areas:
 - i. Managing or coordinating the development and implementation of large scale assessments,
 - ii. Communicating effectively orally and in writing,
 - iii. Technical experience in the implementation of a large scale testing program and a working knowledge of professional testing standards and practices,
 - iv. Academic and technical experience in working with statewide assessments for students with disabilities, and
 - v. Academic and technical experience in working with statewide assessments for LEP students.
 - (2) The Contractor shall provide a personnel roster and resumes of key people who shall be assigned to perform duties or services under this Contract no later than the initial planning meeting. The State reserves the right to refuse, at its sole discretion and notwithstanding any prior approval, any personnel of the prime contractor or a subcontractor providing service in the performance of this Contract. The State will document in writing the reason(s) for any rejection of personnel.
 - (3) The Contractor's Chief Technology Officer shall be available as a direct point of contact for any matters relating to technical considerations.
 - (4) The Contractor shall not remove or reassign any key personnel associated with this Contract without prior written notification to the State. Written notification must be submitted to the State 30 days prior to the reassignment. (Key personnel shall include the Program Manager, Project Manager, Project Coordinator, Test Development Director, ELA Manager, Mathematics Manager, Chief Psychometrician, Software Project Manager, Lead Software Developer and other personnel in Lead or Director level positions)
 - (5) The Contractor shall provide qualified replacements in the event that key personnel become unavailable to provide services due to resignation, illness or other factors. The Contractor shall provide the State with written notice immediately upon determination of the need for replacement personnel. The Contractor shall provide the State with written notification and the resume or vitae of all personnel proposed for the project team. Written notification must be submitted to the State 30 days prior to the replacement. The State reserves the right to refuse, at its sole discretion and notwithstanding any prior approval, any personnel of the prime contractor or a subcontractor providing service in the performance of this Contract. The State will document in writing the reason(s) for any rejection of personnel.
- b. Administrative Tasks – The Contractor shall provide administrative tasks including printing and distribution of limited ancillary materials if needed, scoring, and reporting of assessments, including collaboration and providing field test data to the State's vendor for item and test form development. The Contractor shall maintain project charters for assessment deliverables. Project charters shall be used in conjunction with the annual Work Plan in tracking due dates and deliverables as well as communicating any required



edits and all approvals. All component parts (i.e. items within a test form, districts receiving material shipments, etc.) of a deliverable will be included in detailed trackers within project charters.

c. Continuity of Contracts – The Contractor shall:

- (1) Participate in joint meetings with other State appointed contractors, the Technical Advisory Committee (TAC), and EA Testing Coordinators as needed.
- (2) Cooperate fully with the State in providing a transition between prior/existing contractors and the Contractor to avoid any disruption of services, requirements or deliverables to students, teachers, schools, EAs or the State.
- (3) Cooperate fully with the State and the State's item and test form development vendor.
- (4) Cooperate fully with the State and any future contractor designated by the State to transition to a potential new contract for the TCAP Assessments.
- (5) Work with any State appointed contractor in the handling of all student data to support TVAAS and all reporting or other activities as requested by the State.
- (6) Work with any State appointed contractor in the development of online applications to ensure a smooth transition within existing services.
- (7) The State has a vendor which provides technology services for the EdTools platform to manage all logistical aspects of assessments including communications, calendars, materials management, student demographic data verification, reports of irregularity, teacher-student connection (for TVAAS) and Quick Score reporting for student grades. The Contractor shall work with the State and its technology vendor, or any other vendor with whom the State contracts for these services, in the continued development and maintenance of online applications to ensure a smooth transition within existing services.

d. Management Meetings – The Contractor shall:

- (1) Provide for a minimum of one weekly management meeting between the Contractor and State staff. These management meetings shall include review of the key dates and provide an opportunity to discuss task implementation and status. Meetings shall primarily be conducted via conference call. Webinars and/or onsite meetings may be necessary for review of online applications or in-depth discussion. All meeting expenses related to management meetings will be the Contractor's responsibility.
- (2) Produce progress reports monthly with relevant tasks and activities from the annual Work Plan and progress noted for each. Progress reports shall include a report of completed activities as of the date of the report. The reports shall provide a list of significant operational problems needing corrective action and shall address the following elements for each problem:
 - i. Identify the problem,
 - ii. Assign responsibility for taking corrective action,
 - iii. Evaluate the importance of the problem,
 - iv. Investigate possible causes of the problem,
 - v. Analyze the problem,
 - vi. Recommend actions to prevent recurrence of this or similar problems,
 - vii. Implement new process controls as necessary,
 - viii. Determine what to do with the failed items, and
 - ix. Record permanent changes in process documentation.

Each progress report shall also contain:

- x. Section that summarizes questions or complaints received by the call center,



- xi. Section that addresses issues or problems raised by the State,
- xii. Section that addresses ongoing problems,
- xiii. Section that details the invoices submitted and paid, and
- xiv. Executive summary that provides an informative and substantive description of the major problems and recommendations.

Unanticipated issues or problems shall be reported and addressed as they occur. The report will also include information on project risks and mitigation plans to facilitate discussion and collaboration in an effort to prevent risks from becoming problems. All progress reports shall be submitted in Microsoft Word via email.

- e. Quality Control – The Contractor shall provide detailed, standardized, quality control procedures for review and approval by the State. Approved quality control procedures shall be included in the annual Work Plan for each assessment. The Contractor shall provide quality control measures including but not limited by the following:
 - (1) The procedures shall include: materials printing and packaging, administration, scoring, processing, and reporting.
 - (2) Scoring analysis, data forensics or other mechanisms that are incorporated for detection of cheating.
 - (3) Procedures for assessing the quality of printing. For materials created by the Contractor for purposes of this Contract, the Contractor is responsible for replacing misprinted or otherwise defective materials (including labels) at no cost to the State in such a time as not to impede the assessment, scoring, or reporting of assessment data.
- f. Error Correction – The Contractor shall correct any errors in work products at the Contractor's expense including print errors and program functions. Such corrections must be made consistent with the deliverable schedule and may involve activities that include:
 - (1) Conducting analyses to identify the cause and extent of errors.
 - (2) Reprinting and/or reproducing products or other materials.
 - (3) Providing additional training to Contractor support staff, State staff and EA personnel as needed via training materials, webinars, and or regional meetings.
 - (4) Replacing and/or correcting data files.
 - (5) Reproducing reports.
 - (6) Shipping replacement products or reports to the State or EAs using expedited shipping services.
 - (7) Purchasing of additional equipment (i.e., servers and/or dedicated data circuits).
 - (8) The Contractor shall deliver paper-based testing, at no additional cost, for EAs that have chosen to participate in the CBT and where failure on the part of the Contractor prevents EAs from completing the online assessment. The paper-based backup shall be developed such that students are able to participate in assessments of equal rigor and equality. CBT availability may be impacted by the following errors, including:
 - i. Inadequate performance such as response time, pagination, non-compatibility with required web-browsers, etc.
 - ii. Exhibiting malfunctions that may significantly degrade the student testing experience such as accessibility features not working, items not loading properly, text boxes that do not allow for unlimited characters, etc.
 - iii. The inability to meet the requirements of this Contract related to data collection, management, technology specifications, etc.
- g. Records and Minutes – The Contractor shall take minutes and record lists of participants,



including institutional affiliation and contact information, for all meetings. All minutes, records and lists of participants shall be provided by the Contractor to the State for review within two business days after each meeting. All records and minutes shall be provided in an agreed upon style and format in Microsoft Word via email or other electronic media and posted to SharePoint. The Contractor shall review contact information for each meeting and update contact information if changed.

- h. Program Support Services – For all test administration and each online application the Contractor shall:
- (1) Operate a dedicated call center for the TCAP Assessments. The call center shall have a toll-free phone line and receive calls and e-mails on all business days from 5:30 a.m. to 4:30 p.m., Central Time. The call center shall respond to all calls and e-mails within one working day of receipt using the same delivery method. The call center should offer an online internet chat system for support by September 2017.
 - (2) Log, document, and summarize comments, complaints, and questions from schools and EAs regarding services and products provided by the Contractor. Provide a contact support ticket system that tracks issue types, status, and resolution for telephone, internet chat and email support. Accept support tickets generated from the State's existing EdTools platform. The Contractor shall establish a method of ensuring that issues identified via support tickets are analyzed to determine if further redress should be included in future technical documentation and/or software development updates to online applications.
 - (3) Develop scripts and referral guides for technical support personnel. Separate guides shall be created for each online application defined in Contract sections A.8.f, A.9.c, A.11.c and A.14.f-g
 - (4) During call center hours, trained technical support staff shall be available for any issues that cannot be resolved by call center staff.
 - (5) During test administration, additional support shall be provided to handle computer-based test administration calls, if applicable. Trained technical support staff shall be immediately available for any issues that cannot be resolved by call center staff. The State and the Contractor shall determine additional levels of support as deemed necessary, including onsite support at specific locations..

A.6. Development Activities

- a. All components of the assessments provided through this Contract shall maintain compliance with State Board of Education rules and policies, and state and federal laws. The Contractor shall work with the State to support educators as they plan and provide effective instruction for all Tennessee students including ELs and students with significant cognitive disabilities.
- b. Previously developed items, test forms and associated materials shall remain the property of the Contractor. Items, test forms, ancillary materials and other associated materials provided to the Contractor from the item and test development vendor shall remain the property of the State or other vendor to whom the materials belong. All items and test forms developed under this Contract shall be aligned with Tennessee Academic Standards and shall become the property of the State. This includes completed work as well as unedited items, rejected items, items under revision, test forms, all psychometric characteristics, including item parameters, all data generated and any other materials which may be provided under this Contract. The Contractor shall collaborate with the State and the State's item and test development vendor in the development of all assessment materials, scoring procedures and methodologies, psychometric review and reporting. Any changes in the design of the TCAP Assessments made during the Contract period shall be made in collaboration with the State.
- c. The Contractor agrees to work with the State to import all test items already owned by the State, as well as those planned to be developed or acquired from third party sources throughout the contract period. Contractor must provide, at a minimum, the following supports for item development process:



- (1) Content format support must include QTI files for computer-based testing but will also need to include less structured content types such as PDF, RTF and other electronic document formats.
 - (2) Capability to support the storage and organization of test items, including field test items.
 - (3) Workflows and interfaces as needed to support the flow of question items between the State, Contractor and third party sources for the purpose of item import, iterative approval, revisions and preview of runtime appearance.
 - (4) Workflows and interfaces as needed to support the flow of question items between the State, Contractor and third party sources for the purpose of item import, iterative approval, revisions and preview of runtime question appearance.
- d. Test Specifications (blue print) - The Contractor shall provide test specifications for each operational and field test form containing the following information in a Microsoft Word and/or Excel document according to the delivery schedule in Contract section A.4. Test specifications shall also be provided in XML format. Test specifications shall be included in each assessment's annual Technical Report. Test specifications (blue print) include:
- (1) Assessment name
 - (2) Content area
 - (3) Target grade
 - (4) Desired psychometric properties and measurement characteristics (A.7.)
 - (5) Proposed number of field test items
 - (6) Proposed number of operational items
 - (7) Proposed number of linking items
 - (8) Test Key information, including rubrics for CR items (A.13.c)
 - (9) Item arrangement (within the assessment)
 - (10) Item position comparison table indicating item placement as field test or linking item in previous form
 - (11) The amount of time required for testing
 - (12) All Item specifications (A.6.e)
- e. Item specifications – The Contractor shall provide item specifications containing the following information in a Microsoft Word and/or Excel document. Item specifications shall also be provided in XML format. Item specifications include:
- (1) Item reference number
 - (2) Item type (SR, CR, task, etc.)
 - (3) Specific item type: SR (single or multiple), CR, TEI.
 - (4) Item development status
 - i. new items – items written by the Contractor or the item and test form development vendor and delivered to the State via item writing committee
 - ii. existing un-modified items – items written by previous and/or current contractors located in the State's item bank and reused without edits of any kind
 - iii. modified items – items written by any contractor that have been changed slightly, examples include the removal or edit of a distractor, minor word revisions, minor changes for linguistic simplifications and style changes
 - iv. significantly modified items – items written by any contractor that require comprehensive rewriting to include translations, replacement and/or revision of multiple distractors and extensive overall revisions



- (5) Content area
 - (6) Target grade
 - (7) Test Key information including rubrics for CR items (A.13.c) and ALT tasks, and point values if appropriate
 - (8) Sub-score category
 - (9) Tennessee Academic Standards alignment, includes depth of knowledge/taxonomy information
 - (10) Item difficulty (p-value)
 - (11) Psychometric measurement characteristics (A.7.)
 - (12) Field test administration, location and item placement
 - (13) Origination of item (contractor, author, date written)
 - (14) Item location (within the assessment and name of assessment)
 - (15) Test item, any related passage, graphic, or illustration and all copyright information (A.6.h.(8)).
 - (16) Content, bias accessibility or sight review results.
- f. Test Construction – Test construction activities will be the responsibility of the Contractor and will be completed in collaboration with the State. The Contractor shall provide documentation of the components of test construction as needed by the State.
- g. Alignment – The Contractor shall provide documentation to ensure that assessments provided are aligned to Tennessee Academic Standards. The Contractor will complete additional alignment studies, as requested by the State, for future revisions to the academic standards that cause a significant change in the content being assessed. A significant change shall be defined as greater than 25% of the academic standards being revised. Such alignment studies shall be conducted using a State-approved methodology. Results of alignment studies shall be provided to the State for review and approval; final results shall be included in the technical report.
- h. Item Development – The Contractor shall provide test items to assess student performance of the Tennessee Academic Standards.
- (1) The Contractor shall ensure that the assessment in ELA assesses the standards with attention to the following:
 - i. All reading questions will be text-dependent and require close analysis of passages that include non-fiction and literature from the disciplines of ELA, science, history/social studies, and technical subjects. Authentic passages are preferred and expected to comprise a minimum of 80% of test content. All reading passages will be within an appropriate grade level readability to be approved by the State.
 - ii. Tasks should focus on the central ideas and important particulars of the Anchor Text, rather than on peripheral concepts.
 - iii. Tasks should assess the depth and specific requirements delineated in the standards at each grade level.
 - iv. The majority of reading score points should be devoted to questions that require students to directly provide textual evidence in support of their response.
 - v. Students will be required to write extended response to authentically assess the writing standards. Writing standards shall not be assessed using selected response questions.
 - vi. All writing tasks should be based on a response to at least one text and require students to demonstrate ability to cite evidence.
 - vii. Writing tasks should balance the types of Analytic Writing, as reflected in the



- standards, including persuasive/argument, expository, narrative, and writing. The balance should shift towards more exposition and argument at higher grades.
- viii. Vocabulary items should ask students to use context to determine meaning and focus on general academic (tier 2) vocabulary.
 - ix. Language standards should be assessed authentically through actual student writing or exercises that reflect real world activities (i.e. editing a paper.) Language standards shall not be assessed only through selected response questions.
 - x. The option should be available to access listening, fluency, and foundation skills to the lower grades.
 - xi. There shall be a variety of item types (A.6.e.(2)).
- (2) The Contractor shall ensure that the assessment in mathematics assesses the standards with attention to the following:
- i. The assessment shall reflect the focus of the standards. The vast majority of score points should focus on the most important content defined as major work of the grade in the Tennessee Academic Standards as follows:
 - a) Elementary grades – 65%-75% of the assessment should focus on standards identified as major work of the grade
 - b) Middle school – 65%-75% of the assessment should focus on standards identified as major work of the grade
 - c) High school – prerequisite for postsecondary work particularly algebra, functions and modeling applications. 55%-65% of the assessment should focus on standards identified as major work of the grade.
 - ii. No items shall directly or indirectly assess students on topics prior to the introduction of that topic in the standards (i.e. ratio understanding should not be in any assessment item prior to grade 6.)
 - iii. Assessment items shall reflect the expectations of rigor detailed in the Tennessee Academic Standards. Conceptual understanding, procedural skills and fluency and application shall all be assessed in every grade level. These elements should not be always assessed separately, nor should they always be assessed together.
 - iv. Student's fluency with traditional algorithms should be assessed, as detailed in the standards, in grades 3-6 without the aid of a calculator.
 - v. There shall be a variety of item types (A.6.e.(2)).
- (3) The Contractor shall work with the State to design high quality test items. High quality items:
- i. truly measure what they claim to measure (are aligned to a standard);
 - ii. make sense to students;
 - iii. are equally accessible to all students – regardless of socioeconomic status, race or ethnicity, special needs, English language development levels, etc.
 - iv. mirror as closely as possible the classroom experience, and
 - v. meet all industry standards:
 - a) has clear correct answer choices for multiple select or constructed response items;
 - b) has only one right answer for single selected response items;
 - c) uses clear, concise wording;
 - d) contains grammatically parallel options for selected response items; and



- e) excludes outlier answer options
- (4) The State may conduct an annual review of standards. Minor changes to the academic standards shall be made and reported to the Contractor no later than three (3) months prior to item reviews. Any significant revisions, modifications, additions, or deletions to the academic standards shall be made and reported to the Contractor no later than six (6) months prior to anticipated item content and bias reviews or immediately upon execution of the initial contract, whichever is earliest.
 - (5) The Contractor shall select appropriate stimulus materials, abridge, adapt, and format passages as necessary, and obtain copyright permission for use of text and illustrations in this assessment program.
 - (6) Stimulus materials for future item development submitted to the State for review shall be provided in an original, searchable format. Passages to be reviewed by the State shall be edited as necessary and formatted with illustrations as they would appear on the assessments if selected for development. Selection and preparation of these materials shall be completed by dates provided in the annual Work Plan.
 - (7) Using the specifications listed below, the Contractor shall select reading passages and other stimulus materials in each content area. Authentic passages are preferred. The State shall participate in the development of the passage review process and State representatives shall have the opportunity to participate in the process. The Contractor shall submit as many reading passages and other stimulus materials as necessary for item development.
 - i. The material shall be predominantly authentic passages written for an audience as opposed to commissioned passages, written strictly for the purpose of the test. Passages shall be representative of high quality narrative, expository, analytic, scientific, mathematical, or historical text, realistic content applications, and shall allow for the development of high quality items. Items should be developed consistent with the quantitative and qualitative text complexity expectations of students for each grade level and/or content area written in the Tennessee Academic Standards. The Contractor shall use the following criteria in selecting reading passages and other stimulus materials:
 - a) Reading passages and items developed for ELA will adhere to specifications as outlined in the Tennessee Academic Standards.
 - b) Text shall reflect the ability to expand and use higher order thinking skills and to perform functions in real-world situations. Primary sources, practical applications, and other materials related to life, work, and school should be used.
 - c) The Contractor shall work with the State to select stimulus materials and write test items that ensure rigorous assessments.
 - d) Passages that focus on religious themes, violence, illegal activity, or are culturally bound so as to disadvantage large segments of the population may not be used. The Contractor will execute a process that ensures educators view passages prior to selection for the assessment to ensure sensitivity.
 - e) Reading passages and other stimulus material shall be reviewed using at least one quantitative and one qualitative measure prior to selection to ensure complexity appropriate to the expectation of the Tennessee Academic Standards.
 - f) All passages shall be in English; any non-English words, technical terms or words used above grade level comprehension shall be defined in the passage, in a footnote with the passage, and/or in a glossary. Words critical to understanding the passage which are likely to be unknown to students may be defined or cued by contextual clues. Scientific formulas and mathematics equations critical to successful problem completion which are



likely to be unknown to students will be provided as a footnote with the item and/or on an ancillary reference sheet for the appropriate content area.

- g) The Contractor shall write items in a way as to not cause any student, particularly English learners, vision or hearing impaired students, an unfair disadvantage.
 - h) The Contractor shall utilize principles of Universal Design in item development. The item development process shall prioritize removing potential challenges to the goal of ensuring that the assessment clear and comprehensive for all students.
 - i) The Contractor shall provide reading passages and other stimulus material that are bias free in the areas of gender, religion, ethnicity, nationality, culture, age, visual or hearing impairments, physical differences, socioeconomic status, and rural/urban environments. Test items shall meet the standards of the American Educational Research Association (AERA) and the American Psychological Association (APA) for Differential Item Functioning (DIF).
- ii. Abridging Passages:
- The following are some types of abridging that meet the passage length criteria:
- a) deletion of words, phrases, paragraphs or sections,
 - b) deletion of one or more minor characters and references to the character(s) throughout the selection,
 - c) condensing a book or very long passage,
 - d) editing content as necessary to accommodate deletions made,
 - e) deletion or changing the size of illustrations.
- Passages that are abridged by the Contractor require the approval of the State and permission of the copyright holder(s).
- iii. Adapting Passages:
- a) Passage Difficulty - If a selected passage contains words, phrases, or language structures determined to be too difficult for the targeted reading level, these words, phrases, and/or language structures shall be deleted or changed unless the passage is a published passage.
 - b) Prior Knowledge - If a selected passage contains references that might not be equally familiar to all Tennessee students, these references shall be clarified in the passage or deleted.
 - c) Passage Layout, Graphics, and Illustrations - Passage layout, graphics, and illustrations that accompany passages shall be used as specified by each Performance Indicator. If some illustrations or graphics cannot be used because of content, size, or length limitations, these illustrations or graphics shall be cropped, reduced/enlarged, adapted, or deleted. Additionally, consideration will be given to the ability to adapt or scale for large print or translate to text for Braille.
- iv. Guidelines for Braille tactile graphic materials include the following:
- a) Graphics in mathematics tests must follow provisions of the Nemeth Code and Guidelines for Mathematical Diagrams, BANA (1983).
 - b) Graphic material should be simplified without omitting needed information or creating an unfair advantage by supplying and/or alluding to the answer.
 - c) Descriptions of graphics or illustrations should be presented concisely within the student's test booklet if information in the picture is vital to answering any test item. Such descriptions will appear as transcriber's notes



throughout the test and must be included in the teacher's notes to Braille edition.

- d) An ink print copy of the Braille edition of the test should be provided which corresponds to the Braille format and arrangement on the page and will include the description of items where appropriate.
 - e) Braille readers should only be required to accurately measure to the $\frac{1}{4}$ inch or one-centimeter. Graphics depicting measurements must maintain accurate and true proportions to match the answer choices.
 - f) Keys or legends that supplement reading graphics should be located at the top left of the tactile graphic or on the left-hand facing page.
 - g) Braille labeling on graphics will be presented horizontally. Labels should be placed outside the area of the graphic/figure.
 - h) Charts and graphs should be maintained on one page, whenever possible, or on facing pages.
- v. Emotional Content - If selected material contains emotional content that might interfere with students' ability to process text or otherwise perform on the test, that content shall be changed or deleted.
 - vi. Reading passages, graphics, illustrations, and all copyrighted stimulus materials that are adapted by the Contractor shall be provided to the State for review prior to use. Written permission of the copyright holder(s) is required before submission to the State.
 - vii. Obtaining Copyright Permission:
 - a) The Contractor shall obtain written copyright permission for all stimulus materials used in the execution of this Contract on behalf of the State.
 - b) The Contractor shall obtain written copyright permission for field testing any copyrighted passages and if the passage/stimulus materials survive field testing, permission for use on the TCAP Assessments (a secure educational use) shall be obtained. Written permission shall be obtained for the passages/stimulus materials and any changes made in the passages, illustrations, and format. Copyright permission shall allow for the production of a limited number of enlarged print and Braille copies. A commitment from the copyright holders for granting copyright permission is necessary before an item is used on any form of the assessment materials.
 - c) Written permission is required before field test items can be printed or posted. It is possible that further revisions may be necessary at other points in the test development process, such as when field test data are analyzed. If revisions are required, the Contractor shall secure copyright permission for such revisions. Certain selected passages or stimulus materials to be used for public release shall presume a maximum of 750,000 impressions and 750,000 Internet hits per month.
 - d) The Contractor is responsible for payment of all copyright fees. Copyrights shall be held, at a minimum, for the length of the Contract on all passages or stimulus materials. For passages and stimulus materials (including art) used in products developed during the final year of the Contract and those that are used for multi-years, i.e. practice tests, item samplers, Braille tests, etc. copyright shall be obtained to the end of the test year following the end date of the Contract.
 - e) The Contractor shall provide the State with a table of items with copyright holder approval, copyright term dates, and copyright fees. The Contractor shall provide copies of all correspondence, copyright agreements and/or contracts and other related information to the State prior to the printing of material. All copyright information shall be provided with the item in the item



bank.

(8) Writing and Revising Test Items –

- i. The Contractor shall write new items each year. New items shall be field tested to replenish the item bank and maintain fresh items for future test administrations for all grade level and/or content areas for each assessment. T.C.A. § 49-1-610 requires 70% fresh and non-redundant items for operational forms of each assessment. The State reserves the right to include previously developed and/or implemented items in the item bank. Items which have been used may be reused after three (3) test years for secondary content areas and four (4) test years for 3-8 content areas with State approval. However, the State is required, by law, to release annually all test questions which the State owns, are not subject to copyright restrictions, and have not been deemed linking or field test items. Released test items may not be used in any subsequent operational test.
- ii. The Contractor shall include Tennessee educators in the item development, writing, development, and review process. Tennessee educators shall be recruited with the assistance of the State to write high quality items. The State will coordinate recruitment, application, and selection process of Tennessee educators. Should the State's efforts not yield sufficient numbers of participants the Contractor shall supply qualified staff to continue item writing. The Contractor shall provide training and support for Tennessee educators in the item writing process and ensure items meet the standards for inclusion in a valid and reliable assessment program. The Contractor shall make all logistical arrangements for meetings to host Tennessee educators in item writing workshops. The Contractor's responsibilities for item reviews are detailed in Contract section A.6.h.(8)xi-xxi.
- iii. The Contractor shall work with the State to develop field-test administrations for new assessments according to timelines established in the annual Work Plan and outlined in Contract section A.4.
- iv. The Contractor shall provide details in the annual Work plan for future item development and field testing. The plan shall include the intent to draft a sufficient number of items of the appropriate types and content distribution to create an item bank with sufficient depth and coverage to produce equated, unique test forms plus linking items for field testing each year.
- v. The Contractor shall work with the State in developing a field test plan for future test development. Historically the State has used an imbedded field test item design. Field test items shall not be included in the 70% fresh items and may be scattered throughout each version of the assessments (random placement not required) and/or placed at the end of a subtest for each grade level/content area. The fall administration of secondary content areas may include a minimum of five (5) field test items per content area tested on only one (1) version of the test form. There may be between two and ten items per grade level/ content area per version with a maximum of 30 versions as needed to populate future test administrations during the spring administration.
- vi. The State shall consider a stand-alone field test design for constructed response items in ELA. If used, stand-alone field test administrations will rotate between test years and will generate enough items to provide operational test forms and sample items for up to three test years.
- vii. The Contractor shall work in collaboration with the State and the State's item and test development vendor to review field tested items for each content area for each assessment. Items are expected to be field tested such that:
 - a) Twice as many field test items as needed for final operational forms are developed. An annual maximum of 600 items per assessment per content area may be required.
 - b) New items are field tested on operational forms.



- c) A minimum of 2,500 student responses is used in the calibration of all new items.
 - d) The spring administration will include field test items to provide sufficient items to maintain item banks annually.
 - e) The field test design should address context impact of operational item placement. State approval of the field test design is required.
- viii. The Contractor shall submit for State review and approval an item development schedule in the annual Work Plan. The schedule shall include the number of high-quality items to be reviewed and field tested on each assessment. Roles and responsibilities for all parties involved in item development shall be clearly defined in the annual Work Plan.
 - ix. The Contractor shall provide test items written in accordance with item specifications drafted by the Contractor's content and assessment specialists. State educators and/or content specialists shall be included in item review and approval. Any passages, items or illustrations not meeting the approval of the review participants shall be revised and/or additional items developed until the required number of approved items has been met. The Contractor shall provide clear version control and be able to document edits made to revised versions of items. The Contractor shall provide the State the ability to review prior (rejected) versions of items to ensure all feedback has been incorporated prior to final approval. All these activities shall be completed in accordance with the deliverables timeline as defined in the annual Work Plan.
 - x. The Contractor shall format and make revisions electronically in passages/stimulus material, items, illustrations, and documents. Paste-ups are not acceptable as revised items. All materials needing revision shall be revised by the Contractor under timelines defined in Contract section A.4 and the annual Work Plan. Several revisions to items, illustrations, and instructions may be necessary. The State shall have an opportunity for review and final approval of any work involving revision or replacement. The Contractor shall provide clear version control and be able to document edits made to revised versions of items. The Contractor shall provide the State the ability to review prior (rejected) versions of items to ensure all feedback has been incorporated prior to final approval.
 - xi. The Contractor shall conduct test blueprint and item review meetings. Separate meetings shall be required for content, bias, accessibility and functionality reviews. A small meeting shall be defined as a group of 8-12 participants with State and Contractor personnel in one location regardless of the number of content areas or assessments. A large meeting shall be defined as a group of 13-20 participants with State and Contractor personnel in one location regardless of the number of content areas or assessments. Meeting locations shall be determined in collaboration with the State and may be held virtually via webinar or other electronic media. For each meeting, the Contractor shall provide stimulus materials, draft items, and final formatted items (including graphics and/or illustrations). The Contractor shall provide supplemental materials as needed, including: style guides, dictionaries, academic standards and sub-score categories.
 - xii. The Contractor shall obtain written copyright permission for all stimulus materials, including passages, graphics, and illustrations presented for review. Graphics and/or illustrations shall be provided in draft format for items requiring art. Pencil replications, sketches, drawings, and comments (i.e. "include picture of canoe" or "map of Tennessee") shall not be acceptable.
 - xiii. The Contractor shall provide a proposed meeting agenda and all review materials in an electronic format (Microsoft Word, Microsoft Excel, and PDF) to the State at least five State business days prior to review meetings. During review meetings, the Contractor shall keep detailed notes of any edits, revisions,



comments or concerns made during the meetings and shall share these notes with state representatives for sign off. The Contractor shall maintain the originals for use in test form development.

- xiv. The Contractor is required to ensure the security of all meeting materials. Participants shall be required to sign confidentiality agreements.
- xv. The State shall provide employees, educators, administrators, college/university personnel or other civic stakeholders from across the state to participate in item reviews, standard setting, blueprint reviews and other meetings as needed. The Contractor shall provide a demographic survey for completion by each participant; the survey shall include: gender, ethnicity, region, locale (i.e. urban/rural), title, years of service, and content area specialty/(ies). The Contractor shall provide a summative report of participant demographic information to the State at the conclusion of the meeting. The participants will be identified according to timelines established mutually by the Contractor and the State to facilitate meeting planning.
- xvi. The Contractor shall make arrangements for review meetings to take place for the completion of annual item development requirements. Item reviews may be conducted in person or virtually through a webinar or a secure online portal that provides reviewers the opportunity to accept, reject, or provide feedback for each item.
- xvii. The Contractor shall be responsible for all expenses related to meetings, as defined in A.6.h.(8)xi, required for test development, item review, scoring and reporting. All meetings shall be secure and the Contractor shall pay expenses of all attendees. These expenses shall include: mileage, transportation, lodging, meals required during travel and overnight stays, and parking, which shall all be based on State travel regulations. The Contractor shall provide and pay for the facility, including room rental, breaks, and meals, and any necessary equipment, and materials. The Contractor shall be responsible for professional fees, per item fees for virtual reviewers, consultant and teacher honorariums or substitute pay on a daily basis.
- xviii. Content and bias review shall be provided for passages/stimulus materials for ELA for grades 3-8 and secondary English I, II, and III. Reviews for item content, bias and accessibility shall be provided for all content areas for all assessments. Reviews for item functionality shall be provided for all content areas for all assessments using the computer-based testing platform. Representatives from the State shall have the opportunity to participate in all processes.
- xix. During the content review process, items, passages and graphics/illustrations shall be reviewed for their appropriateness, matched with the academic standards, level of difficulty, and form. Illustrations shall also be reviewed for clarity and match to the suggested passage. The Contractor shall present an adequate number of passages and items to maintain the item bank for future form development. At the end of review meetings, some items and/or passages may need more work or additional items/passages may still need to be written and/or acquired. Illustrations may need revision or replacement. This work is undertaken by the Contractor under timelines developed in the annual Work Plan. The Contractor shall provide clear version control and be able to document edits made to revised versions of items. The State shall be able to review prior (rejected) versions of items to ensure all feedback has been incorporated prior to final approval.
- xx. During the bias review process, items, passages and graphics/illustrations shall be reviewed for bias. The Contractor shall present an adequate number of passages to provide enough items and passages to maintain the item bank for future form development. At the end of these meetings, some items and/or passages may need more work or additional items/passages may still need to be written and/or acquired. Illustrations may need revision or replacement. This work



is undertaken by the Contractor under timelines developed in the annual Work Plan. The Contractor shall provide clear version control and be able to document edits made to revised versions of items. The State shall be able to review prior (rejected) versions of items to ensure all feedback has been incorporated prior to final approval.

- xxi. During the accessibility review process, items, passages and graphics/illustrations shall be reviewed for their accessibility to all students including EL, visually and hearing impaired. Illustrations shall also be reviewed for clarity and ease of translation for large print and Braille. The Contractor shall present an adequate number of passages and items to maintain the item bank for future form development. At the end of review meetings, some items and/or passages may need more work or additional items/passages may still need to be written and/or acquired. Illustrations may need revision or replacement. This work is undertaken by the Contractor under timelines developed in the annual Work Plan. The Contractor shall provide clear version control and be able to document edits made to revised versions of items. The State shall be able to review prior (rejected) versions of items to ensure all feedback has been incorporated prior to final approval.
- xxii. During the functionality review process, items, passages and graphics/illustrations shall be reviewed via the computer-based testing platform for presentation, scaling, and use with all tools including highlighter, magnification, all word processing functions, glossary, and text-to-speech. Each TEI item shall be reviewed with appropriate tools including rulers, graphs, and other related functionality. Illustrations shall also be reviewed for clarity. The Contractor shall present an adequate number of passages and items to maintain the item bank for future form development. At the end of review meetings, some items and/or passages may need more work or additional items/passages may still need to be written and/or acquired. Illustrations may need revision or replacement. This work is undertaken by the Contractor under timelines developed in the annual Work Plan. The Contractor shall provide clear version control and be able to document edits made to revised versions of items. The State shall be able to review prior (rejected) versions of items to ensure all feedback has been incorporated prior to final approval.
- xxiii. A Sight Review Committee shall have time and opportunity to review test forms for the ability to adapt for large print or translate into Braille. For the purpose of sight review, two types of meetings are herein described; these meetings should be conducted in a mutually agreed upon location prior to the completion of a Braille form of the assessments. Meeting sizes are defined in Contract section A.6.h.(8).xi. The State may provide attendees for sight reviews, a minimum of three participants shall be expected for each content area. At least one certified Braille reader shall be included for Braille reviews. Meetings shall take a maximum of three days for review of Braille materials. In general, new Braille materials are developed bi-annually. Copyrights for passages and other stimulus used in the Braille versions shall be the responsibility of the Contractor and shall adhere to guidelines established in Contract section A.6.h.(7).vii. The Contractor shall provide test forms and other materials for review at these meetings. The Contractor shall provide a representative to oversee the sight review and is responsible for all expenses related to these meetings as defined in Contract section A.6.h.(8).xvii.
 - a) There shall be a sight review. The process will allow participants to review, critique, and revise items from proposed items or test forms. Items will be examined for ease of translation into Braille and recommendations will be given for Braille and audio tape transcription. Items shall be supplied in first pages format as defined in Contract section A.6.i.(12).i. A minimum of two forms shall be provided for item selection. A minimum of 15 ink print versions will be made available.



- b) There shall be a Braille review. The Braille version, teacher's transcription notes, and audio tape script will be reviewed for correctness of transcription. A maximum of 10 Braille copies with corresponding ink print versions of test forms, and 10 ink print copies of notes and scripts will be made available.
- xxiv. The Contractor shall be responsible for all expenses related to additional item review meetings that result from an insufficient number of passages, items, and/or graphics/illustrations prepared for initial review.
- xxv. The Contractor shall develop items for instructional classroom use for each grade and content area to create a practice test form. With the exception of the 2016-2017 school year, items should go through the full item review process including field testing. The instructional item bank shall contain items from all sub-score categories. Provision of the instructional item bank shall disclose sample test format and content to the public. Instructional items included in practice test forms shall not be used in future operational test forms. These practice test forms shall be available in a computer-based testing platform. In addition, with items from the instructional item bank that reflect the operational test blueprints, the Contractor shall create practice test forms in a PDF format that may be used in a paper-based administration.
- xxvi. The Contractor shall provide an online item tool available via the internet to teachers for use in classroom instruction for each grade level and content area. The online item tool shall simulate the Contractor's computer-based testing platform and provide students with the opportunity to experience the computer-based testing structure. Items used for this instructional tool should go through the full item review. In the online item tool, the Contractor shall include previously developed items and/or item samplers owned and/or leased by the State as well as any item samplers developed through this Contract. Items shall portray a variety of question styles for every sub-score category. Provision of the items shall disclose sample test format and content to the public. Items used in the instructional tool shall not be used in practice test forms or operational test forms.
- i. Test Form Development – The Contractor shall prepare formatted test forms for each grade level and content area for each assessment. Separate forms may be provided for online and paper testing. Forms shall include linking items and field test items. Form layout and page design shall be completed in collaboration with the State. At least one version of each form shall be modified in large print for visually impaired students.
- (1) The identification and design for use of the linking items for equating purposes shall be finalized with the Contractor in the spring each year for the following test year.
 - (2) Test items directly related to reading passages or stimulus shall be on the same or facing pages whenever possible. For computer-based testing, passages may be presented on a split screen with related items and students shall be able to move up and down within the passage. Passage excerpts shall be included with related test items when the items are placed more than one page from the passage.
 - (3) During forms development for paper test forms, single page passages shall be placed on left sided pages with items on opposite and subsequent pages. Two page passages shall begin on right sided pages.
 - (4) Blank or filler pages shall not be used in printed test books.
 - (5) Braille versions shall consist of enough items common to the regular assessment necessary for equating purposes.
 - (6) Test design for all forms and versions shall be created in collaboration with the State prior to test form layout for paper- and computer-based formats.
 - (7) The Contractor shall provide quality control as follows:
 - i. A comprehensive set of quality control procedures shall be included with the annual Work Plan. The procedures shall include: test development, field testing,



- materials printing and packaging, administration, scoring, and score reporting.
- ii. Scoring analysis or other mechanisms that are incorporated for detection of cheating.
 - iii. Redundant (linking) items in any test form are not used on more than four operational forms and are distributed in time for administration so that they are not reused for at least four years. (Field test items are not considered part of the operational form).
- (8) The Contractor shall provide test forms for each assessment for delivery via a computer-based testing platform, as applicable based on phase-in of online testing. Programming for the computer-based version shall allow for adaptation as needed for student success; e.g., ability to limit one item on the screen at a time, highlighting specific text or portions of a passage, enlarged print, voice activation, reading programming, etc.
 - (9) The Contractor shall prepare and produce final, formatted support documents including administrator scripts, administration manuals, a parent/teacher brochure and miscellaneous ancillary testing materials as described in Contract section A.8.e. Separate support documents and ancillary testing materials shall be provided for each assessment as needed. If needed, separate support documents may be provided for online and paper administrations. Separate support documents and ancillary materials shall also be provided for operational test administrations or any stand-alone field test administrations for each content area for each assessment.
 - (10) Audio versions of each Braille form shall be provided on CD and packaged separately in jewel cases. Braille and large print versions shall be packaged separately. Ink print and audio tape versions of the test form, Braille teacher's notes, and test instructions shall be supplied on a 1:1 ratio for Braille.
 - (11) The Contractor shall provide test items, test forms and all related support documents (including manuals, guides, reports, etc.) in electronic formats for State use. Formats for support documents shall be appropriate for revision and development of presentation slides, publications, and Internet web site use (including: HTML, Publisher, PowerPoint, PDF, MS Word and/or Illustrator files).
 - (12) The Contractor is responsible for production stages of all materials and products developed for each assessment. The State shall be given the opportunity to review and approve all products provided or developed through this Contract. All materials for review shall be delivered to the State via the Contractor's secure SFTP site. Digital copies for proofing, including: large print, Braille, Second Pages, Final Pages, Printer's proof and Printed Samples shall be delivered electronically. Receipt of digital copies by the State shall initiate the review window. All test items and test forms may be reviewed by State personnel. Items and item forms for each assessment will also be reviewed by the appropriate State personnel for the assessment, e.g. special education, curriculum, and federal programs (EL). Timelines for these reviews and each stage of production shall be included in the annual Work Plan for each assessment. Up to ten business days shall be allotted for State staff to review materials at each stage of production. The State reserves the right to make changes in materials at any stage of the project prior to final printing. The Contractor shall maintain a project charter using Microsoft Excel or other approved software to provide clear lines of communication between the different State divisions and Contractor staff. The charter shall include the item summary as defined in Contract section A.6.i.(12)i. The charter shall be maintained on a unique and secure SFTP site established specifically for item review and accessible by Contractor staff as well as multiple State departments. Possible production stages at which the State may be involved for all printed products are defined as follows:
 - i. First pages: Items may be provided for review by content specialists via secure web portal or electronically in Microsoft Word or PDF. First pages provides each item individually and includes the item stem, all responses, all art/graphics, the correct response, alignment with Tennessee Academic Standards to include the



standard and sub-score category, all item statistics to include p-value for items that have been field tested. An item summary of items for review shall be supplied to the State in an Excel Spreadsheet and shall include:

- a) Item reference number,
- b) Sub-score category,
- c) Depth of knowledge/taxonomy info
- d) Correct response,
- e) Content area,
- f) Target grade,
- g) Item difficulty (p-value and other psychometric characteristics) (for items that have been field tested),
- h) Origination of item (author, contractor, date written),
- i) Item placement in previous forms, and
- j) Copyright information.

During this review stage, the State shall have the right to request revisions to items that have not been field tested and/or replacement of items, and such changes shall be made unless obstructed by copyright. The State shall be notified of any changes that would result in invalidation of item statistics; the State reserves the right to make such changes and send an item back for field testing.

- ii. **Second Pages:** Provided in hard copy and electronically in Microsoft Word or PDF, second pages provide the test form in draft layout. Test forms developed for computer-based testing shall be reviewed through a demonstration site for the computer-based testing platform. The State shall be given an opportunity to review second pages to ensure items are included as approved at first pages and make corrections to item layout, placement and typographical errors. Second pages must include art/illustrations/graphics. The State reserves the right to make changes to field test items, art/illustrations/graphics and test form layout at this stage. Each version of the form shall be submitted for review of field test items and their layout. Large print versions shall be provided in hard copy for review of scaling. Modified versions shall not be submitted until the regular assessment has been reviewed and approved.
- iii. **Final Pages:** Provided in hard copy and electronically in Microsoft Word or PDF, final pages provide the test form in final layout. All edits and corrections should be complete. The State shall review final pages to ensure all corrections and edits have been made as requested. Test forms developed for both paper and online shall be reviewed at this stage. Test forms that are delivered via computer-based testing platform and ancillary materials provided via websites shall be considered final and ready for posting after approval at this stage. The State reserves the right to make changes at this stage of production; such changes shall be kept to a minimum and shall be made with student success in mind.
- iv. **Digital (printer's proof/blue lines):** Provided electronically in Microsoft Word or PDF, the digital pages provide products in final print format. For computer-based testing this stage provides a final review of test forms as uploaded into the testing platform prior to operational testing. The Contractor will work with the printer to make final corrections and will submit additional print proofs to the State as required.
- v. **Printed Sample:** Provided in hard copy, final printed samples will be delivered to the State after the product has been printed and the same time as the products are shipped to EAs. Printed products will be shipped after receiving final State approval in writing via email or electronic transmission.



- vi. Braille review consists of the following stages:
 - a) First pages – ink print items presented at the sight review committee as defined in Contract section A.6.h.(48).xxiii.a.
 - b) Second pages – Braille copies presented at the sight review committee as defined in Contract section A.6.h.(8).xxiii.b.
 - c) Digital – Braille copies provided to the State for review to ensure that all changes are made as requested. The Contractor and Braille vendor will make any corrections as required.
 - d) Braille sample.
- j. Test Administration - The Contractor shall conduct all test administrations according to the following guidelines:
 - (1) Produce a number correct score and provide raw score to scale score and uniform grading system conversion tables for SR assessments.
 - (2) Produce scoring for constructed response assessments based on approved scoring rubrics (A.13.e) that may be scored holistically or trait based as agreed upon by the Contractor and the State.
 - (3) Produce a scale score for TVAAS use for all grade level/content areas for all assessments.
 - (4) Measure each academic standard with sufficient items to provide reliable results for the reporting categories.
 - (5) Produce student performance information by sub-score category for all content areas for all assessments.
 - (6) Produce indicators of college and career readiness aligned to performance levels for 11th grade students.
 - (7) Produce an n-count and percentage of students performing within each Performance Standard for each school and EA for all grade level/content areas for all assessments.
 - (8) Produce an n-count and percentage of students absent from test administration.
 - (9) Produce an n-count and percentage of students tested in each membership category.
 - (10) Produce an n-count and percentage of students tested and their performance level for each subgroup as defined by the State.
- k. Test Difficulty and Design
 - (1) The difficulty level of the test and the passing standard set shall represent expectations of all students eligible for testing, as indicated in the Tennessee Academic Standards.
 - (2) The passing score for each TCAP Assessment shall be the same for all students regardless of disability or language proficiency.
 - (3) Passing scores are targeted to a score range which demonstrates mastery of the academic standards, and allow for descriptive analysis of performance in terms of content.
 - (4) The test difficulty shall reflect the expected rigor to ensure student success in post-secondary endeavors.
- l. Test Length
 - (1) Tests are standardized.
 - (2) Each assessment may be divided into subtests as needed to ensure coverage of academic standards, allow enough items for field testing and remain within



- appropriate time limits.
- (3) Constructed response assessments (including mathematics and writing sections) shall be timed in a way that is sensitive to the need for student breaks and limit of students' ability to focus. The Contractor will develop a plan to make informed decisions about test length based on research. For text-based prompts that require comparison between two or more passages or stimuli, multiple sessions may be necessary.
 - (4) Students should be able to finish the test in the time allotted. The Contractor shall provide documentation of validity and age appropriateness of test time limits for each grade level/content area per assessment.
 - (5) Correct answer distribution shall not exceed 20-25% per each alpha response for selected response items.
- m. Special Population Considerations - Needs of special populations (special education, LEP, Section 504 and visually or hearing impaired students)
- (1) Tests, including operational items, field test items, and test bank items are developed and administered in a manner that represents Universal Design principles and which maximizes participation of students with disabilities and allows for accommodations, including English Learner Accommodations, to the extent reasonable, in accordance with the Individuals with Disabilities Education Act, 20 U.S.C §1400 et seq. (IDEA) and State requirements and guidelines. This includes the provision of online, audio, large print, and Braille test versions, and all ancillary materials, including practice tests and reference sheets. Ink print versions of the Braille test version will be provided in equal numbers to the Braille version, for test administration needs. One version of each test form and all ancillary materials will be scaled for large print for each assessment administration (3 times per year for secondary content areas). A Braille version with audio tape of each grade level/content area and all ancillary materials shall be developed at least twice during this Contract. The test will enable all students to meet the same passing score for each assessment regardless of disability or language proficiency.
 - (2) The Contractor must ensure that an appropriate Braille transcription service is used. Such service must specify the use of Braillists who are certified in Nemeth Code translations for mathematics transcriptions and literary Braillists who are certified by the National Library Service in literary Braille for English language arts translations. The State prefers the use of the American Printing House for Braille transcription and will have final approval of the Braille transcription service to be used.
 - (3) The Contractor will provide contact between the Braille transcription service and the sight review committee to ensure that State guidelines are met.
 - (4) Transcriber's notes must be included in the Braille, audio and ink print versions of the assessments. (The number of transcriber's notes should be kept to a minimum.)
 - (5) Current guidelines for special accommodations used are determined appropriate by the IEP team, documented in the student IEP or Section 504 Plan, and consistently used in the classroom. Accommodations that may be allowed and documented on the student response document may include: extended time, read aloud/sign internal test instructions/items, cue, multiplication chart, assistive technology, use of auditory recorder, and other unique accommodations as needed/requested.
 - (6) Current Accommodations, including English Learner Accommodations, are on the State website.
 - (7) The Contractor shall provide a determination, based upon psychometric standards (A.7) and State policies, as to whether particular test administration modifications required/requested for students with IEP or Section 504 plans would alter the validity, reliability, and equity of the standards being measured.
- n. Fairness



- (1) The Contractor shall provide documentation in the Technical Report to verify that item development, test form construction, program implementation, assessment administration, and report information are monitored to ensure that no impediments are created which systematically limit opportunities for success by members of various student populations including: gender, race, ethnicity, nationality, culture, age, physical, visual, or hearing impairments, socioeconomic status, or rural/urban environments, as well as special populations including: special Education, LEP, and Section 504.
- (2) Assessment materials should reflect diversity in demographics. Items and/or passages (reading passages, other textual material, names, and visual material) containing references to people, should depict equal gender balance and a minimum of 15% should portray minority groups.

A.7. Psychometric Activities

- a. The Contractor shall provide all psychometric activities, including Analytical Services, for ELA and mathematics and shall collaborate with the State's item and test form development vendor as necessary to provide all psychometric activities, including Analytical Services, for science and social studies.
- b. The Contractor shall conduct and provide results of annual Comparability and Equating studies to ensure the continuity of psychometric weight and rigor in new test form development. Data related to scale/item parameter drift studies shall be included as required by the State. Additional more in-depth information and changes related to equating or scaling of the assessments may be required for significant changes to State curriculum, (A.6.g.). Forms for the TCAP Assessments shall be equated annually for future development. Modified format assessments including large print and Braille shall be equated to the TCAP assessments. The Contractor shall provide detailed reporting information for the equating procedures/studies (year to year and form to form) in the technical report. (Test Equating, Scaling and Linking Methods and Practices, 3 Rev Ed., Michael J. Kolen & Robert L. Brennan, 2014).
- c. The Contractor shall conduct and provide results of annual alignment studies to ensure the continuity of standards alignment in new test form development. Additional, more in-depth studies completed by third parties may be required for significant changes to State standards, (A.6.g). The Contractor shall provide detailed reporting information for the alignment studies in the technical report.
- d. The Contractor shall finalize content specifications, test design and blueprints for each assessment per schedule in Contract section A.4 with review after each administration for possible revisions. Materials are to be reviewed and approved in collaboration with the State at each step of development; timelines and procedures for these reviews will be established in the annual Work Plan.
- e. The Contractor shall develop and implement Comparability and Equating design that may include a linking item test design, which provides equated forms of each TCAP Assessment for each content area, including paper, online, Braille and large print versions.
- f. The Contractor shall analyze related field test and research data.
- g. The Contractor shall use item response theory (IRT) with three-parameter logistic model for the calibration, scaling and equating of the assessments. The scale shall be continuous across all levels of student attainment to enable the measurement of both high and low performance levels.
- h. The Contractor should apply both classical test theory and IRT models in scaling the assessments. The State has used the guidelines below when using the classical test theory model. The Contractor shall include these guidelines or the rationale for using other values in the test specifications for each administration.
 - (1) 15% - 25% of test items with a P-Value (item difficulty) between .10 - .30
 - (2) 20% - 30% of test items with a P-Value between .31 - .50



- (3) 20% - 30% of test items with a P-Value between .51 - .70
 - (4) 10% - 20% of test items with a P-Value between .71 - .90
 - (5) Each assessment should have a minimum Cronbach's coefficient Alpha \geq .85
- i. The Contractor shall conduct internal item bias, reliability, validity, and other technical studies as necessary to support the TCAP Assessments and provide study results to the State.
 - j. The Contractor shall utilize Samejima's graded response model (GRM) or generalized partial credit model (GPCM) for the calibration of the constructed response items.
 - k. The Contractor will provide reliability assurances (i.e. test-retest correlation or Cronbach's Alpha), documentation on the content validity of the tests, and construct validity (with confirmatory factor analysis), and validity of accommodations of the TCAP Assessments.
 - l. The Contractor shall conduct studies examining criterion-related validity in relation to other test instruments (e.g., TCAP Achievement tests, comparability to other state assessments, test mode comparison/effect) and provide study results to the State in the technical report.
 - m. Modified versions of the TCAP Assessments including large print and Braille shall contain enough of the same or similar items as the ink print and/or online versions to be scaled and equated to the regular assessment. Test design for modified versions shall adhere to standards for operational assessments as defined in Contract section A.6.h-i.
 - n. The Contractor shall utilize a statistically sound methodology to establish a baseline scale for use in equating subsequent forms. A common form (or linking item) equating design or other psychometrically sound method as approved by the State shall be used. The equating of test form difficulty will utilize sub-score categories. The test forms shall be developed using pre-equating to the established test scale scores and confirmed through post-equating analysis unless otherwise proposed by the Contractor and approved by the State. All test forms must be developed to maintain equated performance levels within each grade level and content area and statistical evidence of the equality shall be approved in collaboration with the State and provided in the technical report.
 - o. The Contractor shall provide evidence of statistically sound methodology utilized to maintain equivalency of performance standards across all forms for each grade level and/or content area of each assessment. Evidence should include scale/item parameter drift analysis. This method will produce statistically and psychometrically sound results and will be reported to and approved in collaboration with the State.
 - p. The Contractor shall provide statistical evidence of the consistency and accuracy of performance level classifications over forms and test administrations.
 - q. The Contractor shall use IRT with three-parameter logistic model and classical test theory (CTT) including generalizability theory (GT) analyses for each administration that includes constructed response test items, including essays, to ensure parallel and equivalent item stimuli, validity, and inter-rater reliability in new development. The Contractor shall provide detailed reporting information with statistical and psychometric evidence of the procedures in the technical report.
 - r. The Contractor shall use IRTPRO3 statistical software for item calibration and test scoring in order to allow the State or its designee the opportunity to perform independent quality assurance. If the Contractor uses proprietary software for these functions then the State and its designee(s) shall be granted license free use of the software for the duration of this Contract.
 - s. The Contractor shall conduct inter-rater reliability, validity, test mode effect and other technical studies as necessary for all administrations to support the TCAP Assessments and provide study results to the State in the technical report.
 - t. The Contractor will provide validity and inter-rater reliability assurances (i.e. Kappa and generalizability theory) documentation for all administrations on the validity of accommodations used with the TCAP Assessments.



- u. The Contractor shall provide a plan for conducting Standard Setting for the TCAP assessments as needed. The 3-8 TCAP/ACH and the 3-11 TCAP/Alt assessments are currently scheduled for Standards Setting in all content areas after the 2016-2017 administration. Standards Setting should include the following:
- (1) A panel of educators, who are knowledgeable in the grade level/content areas, familiar with Tennessee Academic Standards and graduation requirements, and are drawn from various stakeholder groups (including representatives for special education, EL, visually and hearing impaired populations, colleges, universities and other civic stakeholders), shall be recruited in collaboration with the State to review the performance levels on all TCAP Assessments.
 - (2) The Contractor shall be responsible for training the selected panelists in standard setting procedures and shall oversee the standard setting process.
 - (3) Using an empirical standard setting process the panelists shall review, reset and/or establish passing scores using items representing two or more forms of the assessments.
 - (4) A Technical Advisory Committee (TAC) shall be assembled to observe the workshop and analyze the results of the standard setting procedure. The committee shall be approved in collaboration with the State and should include at least one nationally recognized standard setting professional.
 - (5) The Contractor shall provide the standard setting plan for review and approval to the TAC at least six months in advance of the meeting. The Contractor shall work with the State to include a nationally recognized third party observer for review of the standard setting plan, observation of the workshop, and analysis of the results.
 - (6) The Contractor shall cover expenses for the standard setting and TAC review, including attendees' expenses as described in Contract section A.6.h.(8)xvii.
 - (7) Standards setting shall be completed for secondary content areas administered in 2015-2016 by the State's current administration, scoring and reporting vendor in August 2016. The Contractor may be expected to attend and observe standard setting at the Contractor's expense. Additionally, the current vendor shall provide student level score reporting of performance levels for the end of course assessments administered in 2015-2016. Assessments completed for grades 3-8 in 2015-2016 will also be scored by the State's current administration, scoring and reporting vendor in order to provide limited raw score data.
- v. The Contractor shall conduct research review meetings in a mutually agreed upon location for the TCAP Assessments.
- (1) The TAC may be assembled to observe planning meetings, item reviews, review performance standards, observe anchor setting and/or range-finding meetings, review scoring rubrics and/or anchor papers, monitor standard settings, analyze the results of review meetings, provide consultation on decisions related to assessment design or administration policies, test design, standards changes, and other decisions which may impact the validity or reliability of the assessments. The TAC shall meet no more than four (4) times annually. The committee shall be selected in collaboration with the State and will include a minimum of one and not more than ten nationally recognized psychometric, test security, special education and/or assessment design professionals.
 - (2) The Contractor shall cover expenses for the TAC review, including hourly consultation fees, honorariums and expenses, as described in Contract section A.6.h.(8)xvii, related to participation in meetings as described in this section. The State's item and test form development vendor may be included in TAC meetings at that vendor's expense.
- w. All test items and forms shall be developed to maintain equated performance levels within each content area for each assessment administration and statistical evidence of the equality shall be provided to and approved by the State annually.



- x. Additional research studies may be required to address special issues such as adverse impact, and/or performance of demographic subgroups including appropriate contrasting group studies.
- y. The Contractor shall provide assessments which meet the following psychometric measurement characteristics:
 - (1) Each test item and form shall be demonstrably related to the skills and competencies in the Tennessee Academic Standards required for the determination of established performance levels for State accountability.
 - (2) Overall reliability for each assessment shall be .85 (Cronbach's Alpha or KR20) or higher given the proposed uses of the test.
 - (3) Overall reliability for each CR assessment shall be $\geq .70$ (70.0%) inter-rater exact score agreement given the proposed uses of the test.
 - (4) Overall validity for each assessment shall address content, one factor/construct, consequential impact, and accommodations; the Contractor shall provide evidence of validity in each of these areas.
 - (5) The Contractor shall incorporate differential item functioning (DIF) analyses in test development and eliminate items with DIF that is statistically significant based upon the Contractor's calculations. The Contractor shall examine DIF for subgroups including gender, race/ethnicity and socio-economic status.
 - (6) Assessments shall have a high degree of precision (conditional standard error of measurement) around the passing (proficient) cut-score.
 - (7) The assessments shall have the capability of producing linear scales continuous across all levels of student attainment.
- z. The Contractor shall develop and publish a preliminary technical report for State review. Upon receipt of written State approval the Contractor shall provide a final technical report for each assessment. Technical reports shall be provided in hard copy, on a permanent storage device, and uploaded to a secure SFTP site.
- aa. The Contractor shall provide a state technical report for each assessment for State review and approval. The Contractor is responsible for making corrections to the technical report after review by the State. The technical report shall include, documentation of procedures, analyses, and results related to:
 - (1) Test blue print and item specifications as defined in Contract sections A.6.d and A.6.e.
 - (2) Raw score to scale score and uniform grading system conversion tables.
 - (3) Item analysis results (psychometric item parameters) to include:
 - i. classical item statistics, including mean standard deviation, item difficulty (p-value and logit of p-value), item discrimination (point biserial correlation), and frequency distribution of options of each item,
 - ii. three-parameter item response theory (IRT) statistics, including relevant item information such as discrimination, location, guessing, standard error of measurement, item information, and item fit statistics (A.7.h),
 - iii. item omission rate,
 - iv. DIF analyses using IRT based procedures or Mentel-Haenzel, logistic regression, multiple indicators multiple causes (MIMIC) for interested subgroups including gender and ethnicity and achievement level. The Contractor shall provide a rationale for using an approach other than IRT with three parameters.
 - (4) Content and equity reviews.
 - (5) Item and test-form development.
 - (6) Sampling plan for distribution of field test versions of each form across the State.



- (7) CR item development including:
 - i. statistical and psychometric evidence of procedures used to ensure parallel and equivalent items (evidence should contain IRT information including b and a parameters from graded response model)
 - ii. statistical and psychometric evidence of procedures used to ensure parallel and equivalent CR subtests,
 - iii. inter-rater reliability and validity assurances,
 - iv. validity of accommodations, and
 - v. sampling procedures for selecting students for item development/pilot administrations.
- (8) Evidence of validity and reliability to include documentation on the content validity of the assessments and construct validity (with confirmatory factor analysis) of the assessments, consequential validity, validity of accommodations, and consistency and accuracy of classification for performance levels.
- (9) Performance level setting.
- (10) Sampling procedures for selecting anchor papers.
- (11) Scaling items and forms and equating forms to include year-to-year equating procedures.
- (12) Stability of scale scores.
- (13) Cut-score standard setting and decision consistency indicators.
- (14) Total number of examinees responding.
- (15) Total number of examinees responding by subgroup and achievement level (include all subgroups identified below and in Contract section A.8.f.(3)vi.
 - i. Ethnic Origin (including: American Indian/Alaska Native, Asian, Black/African American, Native Hawaiian/other Pacific Islander, or White)
 - ii. Race: Hispanic or Latino, Non-Hispanic or Latino
 - iii. Membership data (enrollment)
 - iv. Status (i.e. first time, repeating)
 - v. Class attendance
 - vi. Special programs (including: Title I, Special Education, 504 Service Plan, Gifted, Functionally Delayed, Economically Disadvantaged, LEP Transitional 1/Transitional 2, Migrant, Home School, Homeless, Pre-K participation, Career and Technical Education (CTE))
 - vii. Teacher license number for teacher of record in the content area(s)
 - viii. Not tested (absent, EL exclusion, medical exemption, or other non-participant code as defined by the State)
 - ix. School schedule (i.e. traditional, modified block, block)
- (16) Number and proportion of examinees selecting each response option by subgroup and achievement level.
- (17) Number and proportion of examinees answering each item correctly by subgroup and achievement level.
- (18) Familiarity and interest level of each test item or form utilizing a questionnaire developed in collaboration with the State.
- (19) Data forensics information to include erasure analysis of paper forms and indicators of possible cheating, including key stroke analysis and verbatim responses for



extended response items for computer-based testers.

- (20) Standards alignment information providing evidence of alignment with Tennessee Academic Standards for each grade level/content area per assessment. The Contractor shall complete alignment studies to demonstrate such alignment between the TCAP Assessments and Tennessee Academic Standards. The Contractor shall include depth of knowledge/taxonomy information with standards alignment.
- bb. The Contractor will ensure that the TCAP assessments provide a valid and reliable measure of student's academic ability on a common scale over the applicable grade levels and content areas.
- cc. The Contractor shall provide detailed technical information on the process and results of horizontal and/or vertical scaling across grade levels and/or content areas for each assessment as requested by the State.
- dd. The Contractor shall demonstrate the validity and reliability (Feldt & Brennan, 1989) of all parts of the assessments and test measures and shall provide detailed information to this effect. The assessments shall meet the criteria for test development, administration, and use described in the Standards for Educational and Psychological Testing (2014) adopted by the American Educational Research Association (AERA), the American Psychological Association (APA), and the National Council on Measurement in Education (NCME).
- ee. The Contractor shall ensure that all parts of the assessments adhere to professional research and best practice for developmental appropriateness of tests, testing methods and procedures.
- ff. The Contractor shall meet compliance requirements for the Title I assessments as required by ESSA. The Contractor shall assist the State in the preparation of documents required for reviews by the United States Department of Education (USDOE) related to ESSA or other federal legislation and/or mandates.
- gg. The Contractor shall take corrective action to remediate any deficiencies determined by the peer assessment review conducted by USDOE.
- hh. The Contractor must conduct separate analyses for each section of the TCAP Assessments, including the following statistics in tabular or graphical forms:
- (1) indices of item completion rates for all test takers and by subgroups and achievement levels,
 - (2) descriptive statistics including the mean, standard deviation, minimum, maximum, and quartiles for the total score, and by sub-score if appropriate, for all test takers, and by subgroups and achievement levels,
 - (3) inter-correlations among sub-scores for all test takers and by subgroups and achievement levels,
 - (4) mean proportion correct for all test takers and by subgroups and achievement levels,
 - (5) measures of accuracy including internal consistency measures (reliability coefficients), standard errors of measurement, and misclassification probabilities for all test takers and by subgroups and achievement levels,
 - (6) mean point-biserial correlation for all test takers and by subgroups and achievement levels,
 - (7) other analyses to evaluate the quality of items, item drift, test forms and reports.
- ii. The Contractor must adhere to security procedures as defined Contract sections in A.9.a. and A.10.I
- jj. All narrative reports submitted by the Contractor shall include an executive summary, the full text, and appendixes containing all relevant data tables. The executive summary shall be written to stand alone as a document suitable for public distribution. All final narrative reports and all electronic deliverables shall be provided in Microsoft Word, PDF, and HTML for distribution and posting on the State's web site. The Contractor shall also submit



Microsoft Excel spreadsheet versions of all tables and technical appendixes.

- kk. The Contractor shall conduct comparability studies which examine results of students using on-line versus paper-pencil assessments. Students may be tested both on-line and on paper to provide comparative analysis for the studies. Studies should examine student scores on field tests and operational items. The Contractor shall provide a report of results for the comparability study to include mode analysis, security between paper and pencil versus computer based testing and other parameters as determined in collaboration with the State.
- ll. The Contractor shall support the State in responding to and submitting all materials necessary to successfully complete Standards and Assessment Peer Review.

A.8. Assessment Materials

The Contractor shall provide all required test materials including: test books, response documents, administrator headers, test administrator/proctor scripts, test administration manuals (separate scripts and manuals should be available for online and paper administrations) and the equivalent for computer-based testing. All materials shall be provided to the State for review and possible revision prior to each test administration. The Contractor shall allow the State a minimum of five State business days for initial review. Upon completion of any necessary revisions or modifications the Contractor shall return materials to the State and provide not less than three State business days for final review and sign-off. The State shall have the opportunity to review and modify the design of test materials prior to any printing for any test administration.

The following are critical tasks, which provide specifications for the materials to be developed by the Contractor and sent to the State. The Contractor shall ship materials directly to State, public or private school systems as indicated by the State. Additional materials may be added as needed. All descriptions of materials shall apply to each assessment unless otherwise noted. All electronic files shall be compatible with Windows and Macintosh applications with a variety of web browsers including Google Chrome (x), Microsoft Internet Explorer (x), Firefox (x), and Safari (x) (as defined in Contract section A.10.h). The Contractor shall provide the state with technical specifications required for any online applications including testing platforms.

- a. Technical Specifications for all materials - The Contractor shall use the following guidelines for all materials developed for this program.
 - (1) Test books, multi-page response documents and manuals shall be 8 ½" x 11", saddle-stitched or perfect bound.
 - (2) Test books and response documents shall be color coded by grade and/or content area. The State shall review and approve colors used for printing test books, student response documents, ancillary materials and reports.
 - (3) Large Print versions should be in 18 point font size. Grey-scale and shading should be avoided. The highest possible contrast should be used for text, art, illustrations, and graphics. Paper with a dull finish in ivory, cream, or white with black print shall be used. All unnecessary graphics, boxes or framing of material shall be omitted. Booklets should be 9" x 12" or other size as agreed upon by the State. Binding should allow each page to lie completely flat for whole page viewing and ease of handling.
 - (4) Compact Disks (CDs) shall be provided with jewel cases.
 - (5) Materials defined in Contract section A.8.d-f shall be used for operational and pilot administrations.
 - (6) All materials shall be available in an electronic format for use on the State's internet. The State shall have the ability to cut and paste information from all products for the production of training materials.
 - (7) Test products should be packaged in sizes as agreed between the Contractor and the State and shipped per the following criteria:



- i. Consistent package sizes to be determined by the number of versions per assessment and approved by the State,
 - ii. Standard and agreed upon packaging order within packs,
 - iii. Provide a 10% overage of orders of all materials to allow for damage and/or shortages from the printer and/or during shipping, and
 - iv. All Braille with ink print and Audio, Large Print, and online versions of the test will be delivered to the State at the same time as the regular test materials.
 - b. Introductory Materials and Meetings- the Contractor shall develop and produce the following introductory materials according to timelines established in the annual Work Plan. The Contractor shall participate in up to twelve (12) introductory meetings in the following regional locations: Memphis (2), Martin, Jackson, Nashville (2), Columbia, Cookeville, Knoxville (2), Johnson City, and Cleveland/ Chattanooga for each assessment. Additional trainings may be required to introduce the computer-based testing platform. In addition, the Contractor may participate in regional meetings which shall be held at not less than four of the above mentioned locations twice each year. A registration process shall determine the number of participants attending each meeting; an overage of 10% of meeting materials shall be provided to ensure enough for walk-in participants. All expenses, as defined in Contract section A.6.h.(8)xvii, associated with these meetings will be the responsibility of the Contractor. These meetings are expected to last no more than one day and will not include travel reimbursements for participants.
 - (1) Instructions for Training System Coordinators
 The instructions shall consist of an outline of key issues to be covered during system coordinator training with explanations accompanied by 30-50 full-color graphics depicting relevant items including all online applications, administration protocols, and shipping instructions. The instructions will be provided electronically in a PowerPoint presentation format, and in an 8 ½" x 11" binder that includes the script for use in training school personnel offset printed or photocopied on one side only and a CD containing the PowerPoint presentation. Training shall be conducted onsite and provided via webinar. The webinar shall be recorded and made available to be posted on the State website. The Contractor may provide a training video in addition to the PowerPoint presentation.
 - (2) Instructions for Training School Coordinators
 Training materials provided for system coordinators to use in training school coordinators. The materials shall include a script with explanations and page number references to the test administration manual(s). A PowerPoint presentation will be included. The materials shall be provided in an 8 ½" x 11" binder that includes the script offset printed or photocopied on one side only and a CD containing the PowerPoint presentation. Training shall be conducted onsite and provided via webinar. The webinar shall be recorded and made available to be posted on the State website. The Contractor may provide a training video in addition to the PowerPoint presentation.
 - (3) Materials for Regional Meetings
 Training materials for system coordinators to use in training school level personnel on administration activities for the upcoming assessment administrations. Regional meetings are generally conducted twice yearly prior to the fall and spring administrations. A PowerPoint presentation is required and should include art/graphics related to all steps of test administration and processing to include order entry, shipping, test security, test administration, and post-test processing requirements. Handouts of the presentation will be provided for attendees. Meetings shall be held onsite and provided via webinar. The webinar shall be recorded and made available to be posted on the State website.
 - c. Preparation Materials - The Contractor shall develop and produce the following materials according to timelines established in the annual Work Plan for each assessment. The



Contractor shall refresh the materials with new items at a minimum of every other year for the duration of the Contract.

(1) On-line Item Tool – available for each grade level and/or content area

The Contractor shall provide an online item tool with sample items for instructional use. The tools must meet all technical requirements defined in Contract sections A.8.f.(1) and A.10.a & b., simulate computer-based testing platform, and should include:

- i. information for students, parents, and teachers about the TCAP Assessments including sample items and explanations of all possible item types for every academic standard,
- ii. items will be identified by academic standard and sub-score category by content area for each grade,
- iii. includes both selected and constructed response item types,
- iv. teachers will have access to item keys,
- v. reporting of raw scores and percentages by academic standard and sub-score category at the class, school, system, regional and state level,
- vi. usage data for online format,
- vii. designed to allow teachers to set-up customized online practice quizzes for students, and
- viii. excludes all items used for linking, field testing, practice test forms, and operational test forms.

(2) Item Sampler – 1 per grade level/content area per assessment

The Contractor shall develop and produce an item sampler which utilizes the operational test form blueprints for each grade level/content area per assessment that will provide teachers, students and parents exposure to the overall test design. The item samplers shall encompass 50-75 practice items per content/grade-level developed annually and shall include:

- i. information related to understanding the test and offer suggestions on ways to prepare for the test,
- ii. items will be organized to mirror an operational test form in style, item quantity, and format,
- iii. available in Large Print, Braille, Audio (for Braille), and online,
- iv. designed to resemble the test books by grade level/content area,
- v. includes the test key and a sample response grid,
- vi. reporting of raw scores and percentages at the class, school, system, regional and state level,
- vii. usage data, and
- viii. excludes all items used for linking, field testing, practice test forms, and operational test forms.

- d. Modified Materials – The Contractor shall develop and produce the following modified format materials to assist in the administration of the TCAP Assessments. The Contractor is responsible for proofreading the modified format assessments. Braille shall be reviewed by an independent party and the form must be approved by the State's committee prior to final printing.

(1) Braille Test –Per grade level/content area per assessment



The Contractor shall develop and produce a form of the TCAP Assessments in Braille. Braille materials shall be delivered with assessment materials defined in Contract section A.8.f. The specifications for Braille versions include:

- i. ink print copy, audio CD, scannable answer document shall be provided on a 1:1 ratio,
- ii. teacher's notes for the Braille version shall be developed to assist teachers with transcriber's notes in the Braille edition, use of special symbols, changes in wording, ink print to Brailled page references, and any other administration information exclusively related to the Braille test,
- iii. Braille test books shall be of appropriate weight and type of paper as determined in collaboration with the State,
- iv. Braille tests and directions shall be marked with ink print on the front cover to indicate the corresponding grade level and/or content area,
- v. pages shall be Brailled on one side of the paper,
- vi. items with graphics will be Brailled on facing pages whenever possible,
- vii. audio script shall match the Braille text verbatim,
- viii. use of thermoform will be kept to a minimum,
- ix. lithocodes and inventory bar codes shall be included on all materials, and
- x. packaged individually with teacher's notes, ink print copy, audio cd's (in jewel cases), rulers or other required manipulatives, and a separate scannable answer document for transference of student responses.

(2) Large Print Version per grade level/content area per assessment per administration

The Contractor shall develop and produce one version of the TCAP Assessments per administration in Large Print. Large Print materials shall be delivered with assessment materials defined in Contract section A.8.f. The computer-based testing platform shall provide zoom capabilities for enlarged text onscreen. The Specifications for printed Large Print versions include:

- i. Large Print version shall be in 18 point font size,
 - ii. reformatting of documents may be necessary; however, the form layout should match the regular print test booklet page to page,
 - iii. items requiring measurement should be scaled for use with regular rulers, protractors, etc., or appropriately scaled measuring devices shall be supplied by the Contractor as needed to replicate items available in the online platform,
 - iv. grey-scale and shading should be avoided,
 - v. highest possible contrast for text, art, illustrations, and graphics shall be used,
 - vi. paper with a dull finish in ivory, cream, or white with black print shall be used,
 - vii. all unnecessary graphics, boxes, or framing of material shall be omitted,
 - viii. booklets shall be 9" x 12" or other size as agreed upon by the State,
 - ix. binding shall allow each page to lie completely flat for whole page viewing and ease of handling
- (3) Pre-coded response documents shall be provided for students requiring a modified format test version whenever possible.
- (4) Student responses recorded in the Braille and Large Print books will be transcribed onto regular response documents or entered into a computer-based testing platform by the test administrator.



- e. Administration Materials - The Contractor shall develop and produce all materials to assist in the administration of the TCAP Assessments. Separate materials may be required for online or paper pilot and operational administrations. All materials shall be reviewed for revision in collaboration with the State prior to each administration.
- (1) Computer-Based Testing Platform User's Guide: The Contractor shall develop and produce an Online User's Guide in collaboration with the state for each administration. The guide shall provide technical specifications for use of the computer-based testing platform. Information shall include: hardware specifications, proctor caching requirements if needed, student data upload process, data editing information, detailed information on the use of the assessment tools, and other technical guidelines as necessary. Thumbnail art shall be included as much as possible. Separate guides may be provided with focuses for technical and assessment staff. The guide shall be provided in PDF format for posting to State and Contractor websites and in Word for use by the State in creating training or other materials.
 - (2) CBT Quick Tip Guides: The Contractor shall develop and produce quick tip guides for test administrator/proctors and students. Guides shall be provided as one-page reference for topics such as accessibility features, note pad features, administrator functions, etc. in PDF format. Guides shall be provided in 8.5 x 11 and 11 x 17.
 - (3) Test Administration Manual (TAM): The Contractor shall develop and produce a Test Administration Manual for each assessment per administration. Separate manuals may be developed for field test administrations, computer-based assessments, and paper-based assessments. The TAM shall contain general instructions for administering the assessment including information about planning testing schedules, organizing classrooms, preparation of students, use of standardized testing procedures, administering practice activities, security of materials, completing the student demographic portion of the response documents, accommodations instructions, administration of the test, assembly of materials for scanning and processing, checklists for class, school and system level administrators, procedures and information for returning materials. Thumbnail to full scale images of documents, forms, and other ancillary materials as needed with illustrations and explanatory diagrams shall be used extensively. The TAM shall be reviewed prior to each administration and revisions shall be made to reflect changes related to the program, State and/or federal guidelines. TAMs shall be provided electronically for posting on the internet and in print at a ratio based on number of students testing to be determined by the State.
 - (4) Test Administrator/Proctor Scripts (TAPS): The Contractor shall develop and produce TAPS in collaboration with the State for each assessment per administration. The TAPS shall contain specific instructions for the administration of each grade level and/or content area per assessment. The TAPS shall include information related to test administration including test security, the timing of tests and/or subtests, the number of items and page numbers where subtests begin and end if appropriate, and verification and/or completion of student demographic data on response documents. A script for the administration of each content area shall be included to ensure consistent and appropriate directions are given to students to begin the test. The TAPS shall be reviewed prior to each administration and revisions shall be made to reflect changes related to the program. Directions shall be provided electronically for posting on the internet on a secure site and in print at a ratio based on number of students testing to be determined by the State.
 - (5) Test Administration Group Sheet (TAGS): The Contractor shall produce documents for processing and returning student response documents. The test administration group sheet is used to group answer documents for processing and reporting. This scannable form shall be pre-coded with system and school names and numbers as detailed in Contract section A.11.c. Additional information that may be pre-coded or manually coded includes Teacher First and Last Name, number of students tested, number of students absent, and total number of documents returned. Non-coded



documents shall be provided to accommodate late orders. The TAGS may be packaged with pre-coded response documents and/or bulk packaged in ratios and quantities to be determined by the State.

- (6) Unused Pre-id Header: The Contractor shall produce documents for processing and returning unused pre-id student response documents. The unused pre-id header is used to return and inventory all student response documents containing pre-id demographic information that were not used for operational testing.
 - (7) Guide to Test Interpretation (GTI)/Parent Brochure: The Contractor shall develop and produce a comprehensive Guide to Test Interpretation (GTI) to describe reports provided for each assessment. The GTI will describe and provide examples of the reports distributed to students, schools, and systems. It will contain supportive information related to interpreting the test results, including: sub-score categories assessed and definitions for technical assessment terms. The comprehensive guide shall be developed for use by schools and systems and shall be posted on the State website. From the comprehensive guide, a smaller Parent Brochure shall be developed containing information pertinent to student level reports. At this time, the State plans to provide the Parent Brochure in English only. Should it become necessary to translate the Brochure into other languages in the future, the State will develop requirements with the Contractor to address this need according to mutually agreeable terms. The Parent Brochure shall be distributed with the printed test scores and posted on the internet. The specifications for the Guide and Brochure include:
 - i. Guide and Brochure: available in electronic format that is accessible via the Internet.
 - ii. Guide and Brochure: include thumbnails and larger images of selected reports.
 - iii. Guide: developed for the purpose of providing schools and systems with an understanding of the reports that are available, shall include training information for use of online reporting tools.
 - iv. Brochure: developed for the purpose of providing test awareness for parents and students, shall include training information for use of online reporting tools.
 - v. Brochure: provided in print format on a 1:1 ratio to student reports per content area per assessment.
- f. Assessment Materials – The Contractor shall prepare and produce all test materials required for the administration of the TCAP Assessments.
- (1) Computer-Based Testing Platform – The Contractor shall provide a testing platform that meets the technical specifications outlined in Contract sections A.10 and A.11. The following considerations shall apply to the platform unless otherwise indicated:
 - i. The State shall have an opportunity to review and approve the platform with enough time that any changes requiring programming may be made and fully tested at least six weeks prior to the opening of the operational testing window. The development, review, and approval processes for computer presentation of information and materials parallels similar work for printed tests and products.
 - ii. The Contractor shall ensure that the functionality (e.g. tools, reference sheets, accessibility features, navigation etc.) of the platform is checked carefully to ensure errors have not been introduced during test item/form uploads and that the functionality remains consistent across forms and administrations. The State shall participate in this review process prior to each assessment administration; any revisions needed shall be made by the Contractor.
 - iii. The Contractor shall develop for the State items in formats which take advantage of the capabilities of computer technology. Such items must have research validation as suitable for summative assessments. Examples of technology enhanced item (TEI) types may include:



- a) Drag-and-drop – in which students select from multiple possible responses to select one, via mouse-click or key-stroke combination and then “drag” it to “drop” it in an indicated blank to correctly complete a mathematics formula, text-editing task, etc. Items may require this process multiple times so that multiple answers are provided to multiple blanks.
 - b) Multiple select, hot text, and short response items.
 - c) Rotate and other image transformation items.
 - d) Simulations such as experiments and other demonstrations
 - e) Other formats as requested by the State or developed by the Contractor.
- iv. The Contractor shall work with the State to establish a plan for functionality review of the platform features (e.g. tools, reference sheets, navigation). The plan shall ensure that errors have not been introduced and that the functionality remains consistent across forms and administrations.
 - v. The Contractor shall provide a platform that can be “locked-down” on all devices to ensure students do not have access to resources on either the Internet, the school/system network, or the device in order to maintain test security. Features that will need to be controlled during test administration include unrestricted Internet access, cameras (still and video), screen capture (live and recorded), email, instant messaging, Bluetooth connections, application switching, and printing.
 - vi. The Contractor must work with existing technology infrastructures at the school, district and state level. Hardware, software, and system requirements defined in Contract section A.10 shall indicate suitable infrastructure.
 - vii. The Contractor shall provide documentation and training to districts to set-up secure test environments utilizing the computer-based testing platform. The training shall include system checks which monitor computer software and connectivity readiness for testing and which can be run from individual devices. The State will provide school and district level hardware and connectivity information to the Contractor. EAs will not be expected to submit technology infrastructure information to a separate application or platform.
 - viii. A final review round for each administration will include an “end-to-end” check of the platform, including checks to ensure user access to the product and accurate navigation and functionality.
- (2) Student Test Booklets – The following specifications apply to all student test booklets unless otherwise indicated:
- i. Test booklets shall be color coded by grade level and/or content area for each assessment.
 - ii. One test booklet may contain all content areas in grades 3-8, one test booklet per content area should be developed for secondary assessments. Early grade students may be assessed using a consumable book versus being tested using a non-scannable book and student response document. The Contractor shall consult with the State to determine the type of paper-based assessment materials for early grades. The State shall approve all final materials.
 - iii. During the CBT administration, printed copies of passages for writing prompts may be provided as auxiliary materials for each student. These materials should be treated as secure and inventoried for return, similar to a test booklet and/or student response document.
 - iv. Each grade level and/or content area shall consist of customized forms with a separate scannable response document to be provided.
 - v. A unique litho code per document shall be printed on the front and back covers of the booklet. An inventory listing of litho codes shall be provided to schools and



- districts.
- vi. Test booklets shall be bar coded for inventory management and test security. Bar code information shall be included on inventory sheets provided to schools and districts.
 - vii. Modified format tests:
 - a) Braille test booklets for each assessment shall be provided as defined in Contract section A.8.d.(1),
 - b) Large Print test booklets for each assessment shall be provided as defined in Contract section A.8.d.(2),
 - c) Audio CDs shall be provided for Braille versions. Descriptions of art/illustrations/graphics should not provide an unfair advantage to students utilizing the audio version for Braille or computer-based testers. For the Braille audio version, users should not hear a description of a print item while reading a Braille transcription that is different.
 - viii. Test booklets shall be shrink-wrapped in units to be determined by the number of versions. Standard units of 5 and 20 will be considered.
 - ix. Versions may be spiraled for random distribution. Approximately 10% may be packaged in uncollated groups for use with students with special accommodations to have the test read aloud in small groups.
 - x. Assessments are accessible to students in public, state special, private and home schools. Test booklets shall be provided in sufficient number for each student to be assessed.
 - xi. The State shall submit and approve requests for assessment materials based on orders and current enrollments. Historical usage figures are provided in the table in Content section A.3.f.
- (3) Student Response Documents – The following specifications apply to all student accountability demographic information and response documents unless otherwise indicated:
- i. For grades 3-8 and secondary content areas a machine scannable single or multi-page answer document may be provided dependent upon number of sub-tests, test form design, and content areas. If a multi-page document is used the student accountability demographic information page as detailed in Contract section A.8.f.(3).vi. shall be captured on the outside cover. Teacher licensure information may be captured on the back page. A unique litho code shall be printed on each page of the document. The litho code shall be provided to the State and any State appointed Contractor in the CDF and all post-test data files.
 - ii. Separate and unique documents will be required for pilot and operational administrations for each assessment.
 - iii. The Student accountability demographic information layout shall be customized to fit the needs of the State, meet state and federal reporting requirements and maintain consistency with the layout of other assessment demographic information sheets. Space for a laser printed bar code containing student demographic information as defined in Contract section A.11.c shall be included in the document design. Programming shall be provided to pre-print a barcode containing student demographic data on the student response documents (for students whose data is received in the pre-id process).
 - iv. Response documents shall be designed to match test booklets in each grade level and/or content area for each assessment.
 - v. Assessments are accessible to students in public, state special, private and home schools. Response documents shall be provided in sufficient number for each student to be assessed on paper versions as needed.



- vi. Provide the ability to code demographic data on student response documents or in a computer-based testing platform based on State and Federal reporting requirements, including:
- a) First, Last Name and Middle Initial
 - b) Student ID Number (state assigned)
 - c) Birth Date
 - d) Grade (3-12)
 - e) Gender
 - f) Modified Format (i.e. Braille, Large Print)
 - g) Accommodations as defined by the State
 - h) Not tested (absent, EL exclusion or medical exemption)
 - i) Test Date
 - j) Test Version and/or Form
 - k) Optional Codes for State use (minimum 10 fields)
- (4) Formula reference information sheets – The Contractor shall develop and produce formula reference information for mathematics and/or science equations critical to successful problem completion which are likely to be unknown to students. Reference sheets shall be designed that are appropriate for the content area. Reference information may include multiplication, addition, subtraction, and division tables, formulas such as the Pythagorean Theorem, and the periodic table. Reference sheets shall be included in paper test booklets and/or as an individual document for the content area, provided electronically via PDF for posting on the State website and provided for access via a computer-based testing platform. Reference sheets shall be provided in Braille and Large Print.
- (5) Miscellaneous manipulative – The Contractor shall provide all necessary materials appropriate to the assessment, including rulers, protractors and other consumable items, during each administration. All manipulative shall be provided in accessible formats for all students including through an online platform and in Braille and Large Print if needed/appropriate.

A.9. Assessment Materials Packaging and Distribution

The Contractor shall provide administration support, scoring and reporting services for all EAs and home schooled students beginning in 2016-2017 (TY17).

- a. Security Procedures – The Contractor shall provide detailed, standardized security procedures for review by the State. Approved security procedures shall be included in the technical report for each assessment. The Contractor shall provide and pay for any experts needed should any security matters be litigated. The procedures shall include:
- (1) compliance with all State of Tennessee test security laws,
 - (2) security procedures in the production, distribution, and collection of all test and administration support materials,
 - (3) security procedures and safeguards such as confidentiality agreements as necessary,
 - (4) All data acquired, stored or transmitted electronically shall be managed in a manner consistent with data security provisions defined in Contract section A.10.I.
 - (5) provision of security procedures and safeguards to ensure the security of the items, test forms and all ancillary materials during development, production, field testing, calibration, printing, scoring and reporting,
 - (6) provision of security procedures that shall ensure day-to-day security to prohibit unauthorized personnel access to testing materials through deliberate or



- unintentional actions,
- (7) provision of detailed documentation of all test security procedures in the technical report,
 - (8) provision of procedures for the collection and secure destruction of secure materials (including unused tests, unused answer documents, test administration manuals, and scoring guides) conducted by the Contractor following the test administration,
 - (9) data forensics to include erasure analysis, response edits online, and similar responses to extended response items, data forensics are used to monitor and evaluate the assessments for potential cheating and provide documentation to the State for recommended censure or invalidation of a test document,
 - (10) and provision of documentation to be made available to school and EA personnel for reporting any potential breach of security procedures either in test administration or materials handling; such occurrences reported to the Contractor shall be reported to the State within 24 hours of notification.
- b. The Contractor shall prepare packaging specifications and include them in the annual Work Plan. The specifications will include at a minimum the following:
- (1) Procedures for packing materials for shipment to EAs, including:
 - i. Description of how materials are packed,
 - ii. Examples of packing and inventory lists,
 - iii. Examples of bar coding, and
 - iv. Description of inventory procedures.
 - (2) Procedures for packing materials for return shipment to the Contractor, including:
 - i. Detailed instructions for packing materials,
 - ii. Inventory procedures, and
 - iii. Shipping information, including pre-paid labels and shipper contact information.
- c. Inventory management – The Contractor shall provide a system that allows the State and EAs the ability to track assessment materials. The Contractor shall work with the State or any State appointed vendor in providing inventory information for posting on the State EdTools platform. The Contractor agrees to collaborate with the State for the modification/revision/customization of the inventory program as needed to meet State criteria. The system shall include the following:
- (1) Secure assessment materials (including test booklets and response documents) shall have a barcode with a unique machine-scannable and visually readable sequential identification number
 - (2) The system shall generate shipping labels to be placed on boxes for tracking that include bar coded information regarding the contents of each box. Return labels shall also be provided.
 - (3) Schools and/or systems shall be able to confirm counts of materials received prior to testing and notify the State and/or Contractor of any discrepancies.
 - (4) Schools and /or systems shall be able to report counts of materials being returned for processing and scoring, including used, unused, and inactive materials.
- d. The Contractor shall adhere to the following guidelines for the packaging of all assessment materials:
- (1) Cover sheets shall be provided in each package of materials which clearly defines the content of the package including: assessment, administration, grade and/or content area, and material type (i.e. test booklet, response document, TAGS, etc.).
 - (2) A barcode with a unique machine-scan able and visually readable sequential identification number will be applied to student test booklet covers and response



- documents. The Contractor shall provide a master file containing a record of the sequential identification numbers sent to each school and district.
- (3) In addition to quantities requested by the State necessary for enrollments, the Contractor shall provide a ten percent (10%) overage of all materials to allow for printing errors, shipment and site shortages.
 - (4) Packages of books must be sequential within each box.
 - (5) Test booklets are shrink-wrapped in units to be determined by the number of versions of each assessment per administration.
 - (6) Pre-coded administrative materials, TAGS, shall be shrink-wrapped at a minimum by school and system. Additional levels may be required, i.e. by teacher. Each package shall have a label on the outside identifying the school and system. An overage of blank documents shall be included with all pre-coded documents at a percentage to be determined in collaboration with the State.
 - (7) State approval must be received before shipping printed products. The State will provide approval for shipping of the forms after receiving and examining the printed samples as defined in Contract section A.6.i.(12)v.
 - (8) Braille and large-print materials are to be packaged and labeled separately and included in the shipment of test materials to EAs.
 - (9) The Contractor shall be responsible for mailing or shipping any miscellaneous materials to the State and systems as situations arise.
 - (10) The Contractor shall provide test administration materials and test materials on site in each EA according to the schedule established in Contract section A.4 and the annual Work plan, but no later than 15 days prior to the first day of the assessment window.
 - (11) The Contractor shall provide shipping and distribution information for each administration with samples of packaging labels, packaging cover sheets, and procedures to be included in materials for regional meetings defined in Contract section A.8.b.(3).
 - (12) Provide proper packaging by school of all test materials for shipment to EAs.
 - (13) Maintain detailed records of the number of tests ordered, shipped, retrieved and scored for each school and EA.
 - (14) Utilize transport companies who provide inside delivery, and unload large shipments onto loading docks.
 - (15) Utilize transport companies who provide inside pick-up, palletizing and load large shipments from loading docks.
 - (16) Utilize a shipping method that provides traceable delivery information. If boxes that were used to initially ship materials are to be used again to return materials, this shall be made explicitly clear in all directions to EA and school personnel and the boxes must be of sufficient strength and construction to withstand reuse.
 - (17) Design, print, and distribute detailed bill of lading/packing lists for each school and EA. The EA and school packing lists shall itemize the materials that are being shipped to the school/EA including: contents of each box, quantities of items shipped, inventory information and the destination.
 - (18) Provide check-in procedures for EAs to ensure materials are handled securely.
 - (19) Provide check-in procedures for the Contractor with a method of checking for and retrieving response documents erroneously packaged with used and unused test materials, inactive materials, or modified format materials. Separate procedures may be required for each assessment.
 - (20) Provide a description of procedures to be used by EAs for the inventory of all materials and the collection and shipping procedures for all completed answer



documents and media including a reconciliation/recovery procedure to proactively retrieve all test material from the EAs.

- (21) Provide procedures for providing appropriate materials for students with IEP and Section 504 plans that call for modified test formats such as Braille and Large Print. These materials will be packaged separately and labeled, but will be included in the same shipment with other testing materials, if possible.
 - (22) Provide inventory measures that verify by number, all test booklets, response documents and other secure test materials shipped to EAs and returned after testing or used in an online assessment system. Measures shall include a control process wherein all test products being shipped to and from the Contractor's facilities are counted and tracked. Missing shipments shall be traced, located, and redirected to the proper location, and/or replaced as needed.
 - (23) Provide pre-paid shipping labels and materials for the return of all materials to the Contractor for scoring at the Contractor's expense.
 - (24) Track return shipments to ensure that EAs return all test materials to the Contractor for scoring no later than ten (10) business days after the close of the testing window for the assessment.
 - (25) Notify the State of EAs who do not return materials within the appropriate time frame
 - (26) Prior to testing, the Contractor shall prepare a missing materials report for test documents based on the material verification process that is completed during materials check-in. The purpose of this process is to identify any materials shortages, which will be reported by customer support, before testing commences. The Contractor will ensure that shortages are shipped to EAs immediately.
 - (27) After testing, the Contractor shall prepare a missing materials report for test documents based on the material verification process that is completed during materials check-in. Reports will be prepared for each school with missing materials listed. School reports will be delivered to system coordinators with a system-level summary and a state level summary to be delivered to the State. Any missing materials returned by systems will be recorded in the missing materials inventory maintained by the Contractor. The missing materials reports must be delivered to the State and systems daily as the check-in of secure materials is processed. For each administration, check-in and verification of secure materials must be completed and discrepancies resolved prior to the first shipment of results to Tennessee systems.
 - (28) The Contractor will provide written reports to the State documenting the check-in of all secure materials by the deliverable due date defined in the annual Work Plan.
- e) The Contractor shall adhere to the following guidelines for the retention and disposal of all assessment materials and data collected including scanned data and data collected through the computer-based testing platform.
- (1) Catalog, store and archive completed hard copy student test response documents in a secure facility for twelve (12) months from the reporting date.
 - (2) All data collected, including student demographic information, scanned images of assessments and online assessment responses, shall be retained on secure servers for the duration of this contract.
 - (3) All electronic records shall be archived in a format which is appropriate to secure the confidentiality, integrity and accessibility of all assessment data.
 - (4) Destroy archived hard copy student test response materials in a secure manner (i.e., shredding or incineration) at the completion of twelve (12) months with written approval from the State. At the end of the Contract, remaining archived materials shall be shipped to the State, or a location designated by the State for storage.
 - (5) Utilize electronic imaging and duplication technologies to archive all student responses on CD or other electronic media. All archived materials shall be clearly labeled to include at least content area, teacher name, school name, and system



name. Archived materials shall be maintained by the Contractor for the duration of the Contract. Copies of archived materials shall be provided to the State annually.

- (6) At the term on the Contract the Contractor must sanitize all processing equipment used in the performance of this Contract, including malfunction print devices, in accordance with NIST publication 800-88. The Contractor must obtain State approval prior to sanitizing.

A.10. Technical Requirements

This section defines the physical and procedural technical requirements for a computer-based testing solution to be provided as a software as a service (SaaS) solution for use in high stakes assessment across EAs in Tennessee. This section does not define functional or business requirements and must be read in conjunction with the functional requirements for a computer-based testing platform defined in Contract sections A.8.f and A.11.a-b.

a. Computer-based Testing – Secure Platform

- (1) The Contractor shall provide a secure, web-enabled computer-based testing solution that implements the functional requirements defined in Contract sections A.8.f and A.11.a-b and which has been designed to support high stakes, summative assessment at the volume, size and scale of users based on State historical testing figures provided in Contract section A.3.f.
- (2) The computer-based testing solution shall implement the following modules or functional equivalents:
 - i. Secure browser component(s) for deployment to the local client devices defined under District Infrastructure in Contract section A.10.h and which implements client-side test security requirements as defined in Contract sections A.9.a and A.10.l.
 - ii. Web application delivered from a server-side, web farm supporting a secure, high quality testing experience between end users and the computer-based testing platform.
 - iii. Persistence of testing data as needed to meet the functional and data retention requirements defined in Contract sections A.9.e. and A.11 a-b.
 - iv. Automatic scoring engine for machine scoreable test items.
 - v. Manual scoring interface to support recording of hand-scored questions.
 - vi. Consolidation workflow for machine and non-machine scoreable items into a single scored dataset for transmission to the State as defined in Data Transmission in Contract section A.10.g.
 - vii. Web-based management interface providing role specific functionality and management reporting as defined in Contract section A.11.a.
 - viii. Web-based proctoring interface designed for use by testing coordinators and proctors during live testing sessions and implementing functionality as specified in Contract section A.11.b.5.
 - ix. Content Delivery Network (CDN) or other mechanism designed to ensure that content and media associated with question items can be delivered to client devices in an efficient manner, in a high concurrency environment consistent with the volume, size and scale of users based on State historical testing figures provided in Contract section A.3.f.
 - x. Workflows and interfaces as needed to support the provision of user, role, student and class association data needed by the computer-based testing platform
 - xi. Workflows and interfaces as needed to support the transmission of test result datasets to the State in whole or in part as defined in Data Transmission in Contract section A.10.g.



b. Computer-Based Testing – Practice Platform

- (1) The Contractor shall provide a web-enabled computer-based practice testing solution that is similar in look and feel to the computer-based secure testing platform for high stakes testing, implements the functional requirements for practice testing defined in Contract sections A.8.c and A.11.a-b and which has been designed to support the volume, size and scale of users based on State historical testing figures provided in Contract section A.3.f.
- (2) The computer-based practice testing solution shall implement the following modules or functional equivalents:
 - i. Web application delivered from a server-side, web farm supporting a runtime practice testing experience between end-users and the online practice testing service.
 - ii. Persistence of practice testing data as needed to meet the functional and data retention requirements defined in Contract sections A.9.e. and A.11 a-b.
 - iii. Automatic grading engine for machine gradable test items
 - iv. Web-based management interface providing role specific functionality and management reporting as defined in Contract section A.11.a.
 - v. Web-based proctoring interface designed for use by testing coordinators and proctors during live practice testing sessions and implementing functionality as specified in Contract sections A.11.b.5.
 - vi. Workflows and interfaces as needed to support the provision of user, role, student and class association data needed by the practice testing solution.

c. Pre-conditions and Phase-In for Computer-Based Testing

- (1) The State intends to introduce computer-based practice testing and computer-based, secure high stakes testing in a progressive manner, starting with a small number of students and progressing to larger numbers over the course of the Contract.
- (2) The criteria for selection of students in each phase of implementation will be based on a combination of: subject area, grade level, and optional district participation at the discretion of the State.
- (3) Progression to each subsequent phase will be based on evidence of successful testing derived from two sources:
 - i. The previous phase, if applicable,
 - ii. Pilot and stress testing, as described below.
- (4) The State places high importance on conducting successful, real world pilots with TN EAs. Pilot and/or stress test outcomes will be a major factor in the State's decision to progress from practice testing to high stakes computer-based testing and to increase the number of students participating in each phase of computer-based testing. The exact plans for stress testing will be included in the annual Work Plan and the parameters of a pilot will be:
 - i. The infrastructure, server platform, architecture and software components used in the pilot test will be materially the same as those proposed for use in the production/operational phase.
 - ii. The pilot will be conducted with actual Tennessee EAs that are representative of the student population and infrastructure readiness of districts intended for inclusion in the proceeding production phase.
 - iii. The pilot will be conducted using a matrix of devices, operating systems and browsers that closely resemble the matrix expected in the proceeding production phase.
 - iv. The pilot will utilize test items of the same types, complexity and content size



anticipated in the proceeding production phase.

- v. The pilot will be of equivalent duration, concurrency and usage pattern anticipated in the proceeding production phase.
- vi. The pilot will include an appropriate percentage of tests with accessibility features enabled consistent with the expected usage of accessibility features in the proceeding live test.

- (5) A pilot will be deemed successful when a minimum of 95% of test participants report a problem free user experience consistent with the performance criteria defined under Performance in Contract section A.11.k.
- (6) A minimum of one successful pilot must be conducted prior to the first and each successive phase-in of student counts until full scale (statewide, all content areas) is reached.

d. Fault Tolerance

- (1) The Contractor shall deliver an end to end solution, inclusive of client software, server and architectural components that is highly fault tolerant, thoroughly tested and hardened over time to the real world conditions that occur when conducting computer-based testing statewide.
- (2) The computer-based testing platform shall recover without end-user intervention from the following circumstances without a material degradation of the user experience:
 - i. Brief (less than one minute) loss of internet connectivity between the EA point of ingress and the Contractor's data center servers.
 - ii. Brief loss of wide area network connectivity between a testing location and an EA central location.
 - iii. Brief loss of wired or wireless connectivity between a client device and the local area network (LAN).
 - iv. Temporarily dropped or corrupted TCP/IP packets or other interruption of data transfer protocol.
 - v. Brief drop or fluctuation of network performance below that defined in District Infrastructure (A.11.h).
 - vi. Brief device non-responsiveness due to central processing unit (CPU) performance, operating system activity or other resource conflicts.
 - vii. Any error or log message transmitted by the Contractor's client-side application software.
 - viii. Any event that occurs server-side in the Contractor's infrastructure related to load, concurrency, normal transients, or scheduled and unscheduled processes initiated by the Contractor.
- (3) The computer-based testing platform shall be able to recover user state (status of test progress) within fifteen (15) minutes with or without end-user intervention under the following circumstances:
 - i. Client device becomes permanently non-responsive for any reason and a new device is provided to the tester.
 - ii. Battery depletion or loss of power on client device and a new power source or device is provided to the tester.
 - iii. Malfunction or failure of client device and a new device is supplied to the tester.
 - iv. Log out or user error on client device and the user logs back into the system.
 - v. Permanent loss of LAN, wide area network (WAN) or internet connectivity between client device and the Contractor's data center and loss is restored.
 - vi. Infrastructure failure at EA or testing facility and failure is rectified.



- vii. Application, browser or operating system “crash,” or unexpected restart on local device occurs and device is restarted successfully.
 - viii. Unexpected failure or unavailability of a required resource at the Contractor’s data center.
- e. Resources Dedicated to the State – The Contractor shall configure services for the State in their data center and on their server infrastructure in such a manner that the actions of other customers of the Contractor, other tenants of the data center, or data center service providers cannot impact the performance of the CBT solution provided to the State. Such consideration shall include;
- (1) Attacks on other customers/tenants such as Denial of Service (DoS) attacks.
 - (2) Excessive bandwidth utilization.
 - (3) Excessive resource utilization.
 - (4) Excessive power or cooling utilization.
 - (5) Excessive LAN and internal switching utilization.
 - (6) Planned maintenance, shutdowns, restarts or reconfiguration.
 - (7) Poorly tested software, equipment, connectivity or infrastructure configuration.
 - (8) Inappropriate filtering, firewall or other edge device rules.
- f. Database and Data Persistence - The Contractor shall develop database and data persistence strategies that are consistent with the scalability, performance, security and redundancy profile of a mission-critical, enterprise grade solution.
- (1) Data persistence considerations shall include:
 - i. Use of generally acknowledged “enterprise grade” commercial database technologies, such as; Oracle or SQL Server or cloud platform equivalents. The State does not consider open source or home grown data storage solutions to be appropriate.
 - ii. Demand planning and proactive resource allocation.
 - iii. Use of sharding (a database partitioning method that separates very large databases into smaller, faster, more easily managed parts) to dynamically grow database extents.
 - iv. Appropriate use of data encryption and access control, including use of encryption at rest as recommended in Family Educational Rights and Privacy Act (FERPA) guidelines.
 - v. Change management controls over production database servers.
 - vi. Modeling of record locking semantics to eliminate record contention (i.e. some threads/processes being delayed until a lock is released thereby impacting CBT application performance) during critical periods.
 - vii. Planned execution of additional database activities such as statistical data collection to avoid resource contention during critical periods.
 - viii. Mirroring of databases with active failover to a secondary (backup) resource in the event of a service disruption.
 - ix. Data backup and disaster recovery protocols, including offsite considerations.
 - x. Proactive monitoring to manage file size growth and address failure indicators.
 - (2) Data retention shall occur in a manner consistent with the functional requirements provided in Contract sections A.9.e. and A.11 a-b.



- (3) All data shall be stored and manipulated in a manner that is consistent with the requirements of FERPA, and other federal and state laws and policies as referenced in this Contract.
 - (4) All data center facilities utilized by the Contractor shall be physically located inside the United States of America and conform to one of the following standards: ISO27001, SOC2 Type 2 or FEDRAMP.
 - (5) All data captured, manipulated, processed or transformed under this Contract remains the exclusive property of the State and may not be viewed, modified or disclosed to any party without the written approval of the State except for reasonable dealings as needed to execute on the deliverables of this Contract.
- g. Data Transmission – The Contractor agrees to work with the State to ensure bi-directional data flows between the State and Contractor are efficient, secure and robust, and that raw and/or enriched data is made available to the State according to timelines established in Contract section A.4 and as detailed in the annual Work Plan. All data flows shall be in accordance with the functional requirements specified in Contract section A.11.b.6.
- (1) Data flows will include;
 - i. Provisioning data such as; users, roles, students and class association data from the State to the Contractor as required by the Contractor’s solution.
 - ii. Full or partial datasets of scored results from the Contractor to the State.
 - iii. Structured management reports from the Contractor to the State.
 - iv. Logs, statistics and student interaction metrics from the Contractor to the State.
 - (2) Working with the State is defined as;
 - i. Reaching agreement on the schema of data structures for each data flow required.
 - ii. Reaching agreement on the protocol and format for the transmission of data in the most compatible way for all data consumers.
 - iii. Reaching agreement on the methodology and process for the efficient transmission of data.
 - iv. Reaching agreement on the security and authentication model for the most secure and trustworthy transmission of data.
- h. District Infrastructure – EAs in Tennessee do not implement a standardized IT infrastructure statewide. Therefore, multiple device makes and models, browser and operating systems exist.
- (1) The Contractor shall design and implement a computer-based testing solution that is compatible with the matrix of devices and operating systems that exist in EA’s in Tennessee. The Contractor must ensure that there is a fair and equitable testing experience for all students in Tennessee regardless of the device, browser or operating system in use such that all students across the state have the same testing experience.
 - (2) The State shall provide an updated device matrix of computer devices in use in Tennessee EAs as specified in Contract Section A.4.c.1. Subject to change, the Table A.10.h.2 below reflects the most accurate data currently available:

Table A.10.h.2	
Device Count by Operating System (OS)	
Operating System	Sum of Device Count
██████████ or newer	165
██████████ or newer	18,288



OS	40,235
	47
	4,625
	18,641
	8,940
	5,221
	238
	6,008
	169,729
	14,094
	4,156

Note: The Contractor will not be expected to support operating systems that have reached end-of-life status and/or that are no longer supported by their manufacturers.

- (3) While all EAs in Tennessee are required to have high speed internet available to all testing locations within their district, the quality and performance of internet connectivity will vary considerably between EAs due to factors such as; geography, infrastructure availability, specific carrier and Quality of Services (QOS).
 - (4) The Contractor shall design and implement a computer-based testing platform that is consistent with the performance requirements outlined in Performance (A.10.k) across the range of connection speeds available in Tennessee, as outlined in Table A.10.k.3 below.
 - (5) The State shall provide an updated list of broadband services in use in Tennessee EAs as specified in Contract Section A.4.c.1.
 - (6) The Contractor is advised that while all LEAs in Tennessee are required to have sufficient wired and/or wireless networking to ensure connectivity of student devices to the Internet, the quality and performance of local area networks will vary considerably between testing locations due to factors such as; equipment type, age of equipment, building construction and environmental factors.
 - (7) The Contractor shall design and implement a computer-based testing platform that is consistent with the performance requirements outlined in Performance (A.10.k) across the range of LAN speeds and capacities available in Tennessee.
 - (8) The State shall provide an updated list of LAN standards in use in Tennessee EAs as specified in Contract Section A.4.c.1.
- i. Service Availability – The Contractor shall implement systems and processes to ensure the continuous availability of computer-based testing services throughout critical testing periods. A less stringent service level agreement (SLA) is acceptable outside of live testing windows. Service availability considerations shall include:
- (1) Scheduled maintenance and service outage notification protocols.
 - (2) An incident response team with documented protocols.
 - (3) Redundancy of broadband services into Contractor's data center.
 - (4) Redundancy of critical servers and other data center infrastructure.
 - (5) Redundancy of critical data storage devices.
 - (6) Active failover between redundant components.
 - (7) Backup power generation.
 - (8) Proactive monitoring and defense protocols for service limiting exploits such as; DoS attacks.



- j. Scalability – The Contractor shall implement and maintain technology infrastructure for the computer-based testing platform that has the ability to scale horizontally to ensure a high quality testing experience for all users consistent with the volume, size and scale based on State historical testing figures provided in Contract section A.3.f, and without service degradation or negative impact to active users. Scalability considerations shall include:
- (1) Broadband into the Contractor’s data center taking into account the performance of peerage between the Contractors’ broadband vendor and carriers in use in Tennessee EAs.
 - (2) Filtering and edge devices in the Contractor’s data center.
 - (3) LAN connectivity within the Contractor’s data center.
 - (4) Front end web servers.
 - (5) Caching and CDN devices and services.
 - (6) Middle tier servers including asynchronous and batch processing services.
 - (7) Data access tiers and overall data throughput, particularly where that throughput is synchronous with the user interaction.
 - (8) Database storage.
 - (9) Data backup.
- k. Performance
- (1) The Contractor shall provide a computer-based testing platform that is responsive to user interactions without excessive wait times per Table A.10.k.3 below with specific emphasis placed on time critical user interactions, such as; live student testing and proctoring.
 - (2) The Contractor shall ensure that where wait times are an expected part of the user experience, such as; loading a full test at the outset of testing, the user receives a clear and unambiguous indicator that a long running action is taking place.
 - (3) Testing Application Performance Schedule (maximum delay times under full student load):

Table A.10.k.3	
Activity	Maximum Delay
Application Start Up (O/S launch to application home page rendering)	5 seconds
Initial Test Load	30 seconds
User Sign In to Testing Application	10 seconds
Commencement of Test (Start to first question loading)	5 seconds
Next Question Navigation	3 seconds
Previous Question Navigation	5 seconds
Submit Test	5 seconds

- l. Data Security - The Contractor shall implement a computer-based testing solution that is inherently secure and closely aligned with the rigorous data privacy standards of FERPA, State and Federal requirements. Security considerations shall include:
- (1) Encryption at rest for any data that includes personally identifiable information (PII) or FERPA protected information.
 - (2) Encryption in motion, including use of a secure sockets layer (SSL) encryption protocol between client devices and the testing servers.
 - (3) The establishment of a cyber-incident response and notification plan.
 - (4) Verifying data center vendor certifications, including alignment with; ISO27001, SOC2 Type 2 and FEDRAMP certifications.



- (5) Access logging and intruder detection processes.
 - (6) Threat modelling and vulnerability assessments, including; malicious exploits, such as; Man in the Middle and SQL Injection risk assessments.
 - (7) Data disposition process.
 - (8) Employee and contractor vetting, and access control processes.
 - (9) User authentication processes.
 - (10) Role management and user authorization processes.
 - (11) Regular Penetration testing.
- m. Capacity Planning – The Contractor shall conduct capacity planning prior to each pilot or phased expansion of computer-based testing to model demand and predict utilization across all components of the solution. Any potential deficiencies, resource constraints or capacity shortfalls shall be identified and addressed prior to the commencement of the phase. Capacity planning shall include:
- (1) Broadband capacity into the Contractor's data center taking into account the performance of peering between the Contractor's broadband vendor and carriers in use in Tennessee EAs.
 - (2) Filtering and edge device capacity in the Contractor's data center.
 - (3) LAN capacity within the Contractor's data center.
 - (4) Front end web server capacity.
 - (5) Caching and CDN capacity.
 - (6) Middle tier server capacity including asynchronous and batch processing processes.
 - (7) Data access tiers and data throughput capacity.
 - (8) Database storage capacity.
 - (9) Data backup capacity.
- n. Monitoring and Diagnostics – The Contractor shall implement rigorous, proactive exception alerting, real time monitoring and diagnostic capabilities for all components of the computer-based testing platform. Monitoring and diagnostics shall include:
- (1) Logging of user access events.
 - (2) Logging of key user interaction events to support an audit trail if needed.
 - (3) Detailed logging of application errors and anomalies with stack and trace data to support diagnostics in the event of problems.
 - (4) Logging of all system and server-side errors and anomalies.
 - (5) Real time monitoring of all key performance indicators and metrics for all servers and computer resources used by the solution.
 - (6) Proactive exception monitoring of all key servers and computer resources based on thresholds and key performance indicators with escalating exception notifications.
 - (7) Implementation of inline performance counters and other common diagnostic "hooks" in key application source code.
- o. Software Development Lifecycle – The Contractor shall implement a methodical and structured software development lifecycle (SDLC) to minimize operational errors, improve transparency of changes, drive inclusive decision making and ensure optimal quality assurance. Development of an appropriate SDLC includes:
- (1) An appropriate environment strategy for all software development to clearly delineate software that is in production versus that which is under development.



- (2) A rigorous change management policy to protect the sanctity of the production environment and to minimize operational errors at critical times.
 - (3) Inclusive (Contractor and State) sign off and approval on all activities potentially impacting student experiences, including; infrastructure upgrades, rolling new code, functional enhancements or changes to existing systems.
 - (4) Robust quality assurance processes, including; code check-in rigor, usability testing, functional testing, scale and performance testing, code coverage testing and user acceptance testing by the State.
 - (5) Comprehensive bug lifecycle management.
- p. Penetration Testing – The Contractor agrees to submit to penetration testing conducted by a third party at the cost of the State for all end points associated with the computer-based testing platform.
- q. Accessibility – The Contractor shall implement accessibility / accommodation features for all student facing user interfaces that are intuitive to use, functionally robust and support at a minimum the accessibility requirements for online student testing defined in Contract sections A.11.b.

A.11. Functional Requirements

The Contractor shall provide functionality of online applications as defined in Contract sections A.8.c & f.(1), A.9.c, A.11.c, and A.14.f-g. for computer-based practice and operational testing, online practice tools, item sampler, item reviews, and student demographic data for use in assessment administration, processing and reporting. The Contractor shall provide three environments for use in the deployment of all online applications. These environments shall be defined as preview, demonstration, and production. Access to the development site shall be secure and provided to State level users only. EA and school level users shall be given access to the demonstration site for training purposes. Access to the production site shall be secure and provided based on the security level of the user as established in the hierarchy defined in Contract section A.11.a.(2).

- a. Specifications – Each of the online applications shall include the following:
- (1) Application modification/revision/customization which allows for stakeholder input and buy-in will be provided as requested to meet State criteria shall include the following:
 - i. Screen shots and/or application demos shall be provided in the development environment at each specified milestone unit,
 - ii. Comprehensive demo of the application/project shall be provided in the development environment for review and alpha, beta, etc., testing by State users (may include system level users),
 - iii. Training demo of the application/project shall be provided in the demonstration environment for review and alpha, beta, etc., testing by State and system users, training shall include online webinars,
 - iv. Operational application/project shall be provided in the production environment (Changes may be made to the application/project at any stage prior to the operational load of the application to the production environment for the current assessment. Revisions to the application/project may be made prior to the next assessment as needed), and
 - v. Reporting functions that include summary data for State review of user logins, IP address of logins, tracking of user load times, applications used, activities completed in the application, data edits, number of students, data uploads, data downloads, reports created, time spent in each activity, etc.
 - (2) User management to include a secure user hierarchy for use with all applications including: state administrators, state users, State CORE office users, system level administrators, system level users, school level administrators, school level users



- (including students). Access shall be provided to each level based upon guidelines provided by the State. Different rules may be applied to each application,
- (3) User management section will allow State, system, and school administrators to manage all user accounts within their authoritative domain,
 - (4) Online access to procedural guides and other user instructions, training videos, as well as live online training delivered via webinar, for each application as needed,
 - (5) Preview site accessible by State personnel for review of applications during customization,
 - (6) Demonstration site containing simulated live data and test items for practice and training at the school level shall be available to State, system and school personnel not less than three weeks prior to operational administration,
 - (7) Trained customer service as defined in Contract section A.5.h.,
 - (8) Customized reporting to meet State reporting requirements with appropriate training material as requested by the State,
- b. The Contractor shall provide all required functionality services for each assessment and test administration. Functionality services shall include the following:
- (1) For the duration of this contract, all component products of the Contractor's systems shall be fully supported (primary/mainstream support) by the respective manufacturers.
 - (2) The Contractor's computer-based testing platform must allow for input via keyboard, mouse, touchpad or touch screen. The input device must allow students to select/deselect, drag, and highlight text, objects and areas. The input device must allow students to enter letters, numbers, and symbols and shift, tab, return, delete, and backspace. To meet security guidelines, each Bluetooth/wireless keyboard must be configured to pair with only a single computer during assessment administration.
 - (3) The Contractor's computer-based testing platform must provide for assistive technologies for students requiring accommodations including headphones, earphones, microphone, screen/text reader, increased font size, capability for students to "zoom" in on sections of text, and color contrast. The Contractor shall work with the State to ensure the platform meets the needs of students using assistive/adaptive devices.
 - (4) The Contractor's computer-based testing platform must provide the necessary tools and features for students to successfully complete testing. Such features may include, calculator, ruler, straight edge, formula or vocabulary reference sheets, option eliminator, bookmark, highlighter, pop-up footnotes, and note taking. The Contractor shall work with the State in reviewing all accessibility features to ensure the best test environment possible.
 - (5) The Contractor's computer based testing platform shall provide a proctor interface that ensures standard administration of computer-based testing for all students. The proctor interface shall include the following:
 - i. Student management – the ability to add and delete (un-enroll) students at the school and classroom level, and edit student data demographic details.
 - ii. Roster management – the ability to add and delete entire rosters, add and delete individual students on rosters, edit teacher information on rosters, edit test form information, move students to or from an alternative school location.
 - iii. Accessibility management – the ability to add, edit, or delete accessibility features and accommodations for students or groups of students by content area.
 - iv. Administration management – the ability to pause and resume a student or group of students during a test session, move a student to a different device or location, monitor several testing sessions at one time, mark a student as a non-participant (absent, EL excluded, medical exempt, etc.), reactivate a non-participate student



- (i.e. for a makeup test), and restart a test for a student who accidentally submitted their test.
- v. Assessment reporting – provide overview information at the school and classroom level that includes enrolled students and their demographic information, student test schedules, rosters, tests that have started, tests that are paused, tests that are finished, and the ability to finalize testing and submit to the State.
- (6) The Contractor shall work with the State and the State's technology vendor to ensure secure transmission of all data associated with assessment.
- i. The Contractor shall work with the State and the State's technology vendor to provide integration of data from all online applications into the State's Education Information System (EIS) and EdTools architecture via web services.
 - ii. The Contractor shall work with the State and the State's technology vendor to receive data from the State's EIS and EdTools via web services.
 - iii. The Contractor shall provide all data in agreed upon formats which may include comma delimited, HTML, XML, CSV, JSON, GIF, HDF, and JPEG.
 - iv. All data and metadata must be encrypted both in transport and at rest. All data and metadata are the property of the State of Tennessee.
- c. Enrollment and data provisioning - The Contractor shall provide a system to upload student demographic information from schools, EAs, the state student management system and/or State vendors.
- (1) The Contractor shall work with the State and/or other State vendors in the transfer of student demographic and assessment data for review and use for pre-id of paper response documents, student data upload into computer-based testing platform, student demographic data verification, teacher-student linkages for teacher-effect data, student raw scores for grade calculations and other processing or reporting requirements as needed by the State.
 - (2) The Contractor shall work with the State or any State appointed vendor in reviewing demographic and enrollment data on the State EdTools platform.
 - (3) The Contractor shall ensure that the system maintains compliance with the State's student management system to enable the acquisition of student information from schools and/or systems.
 - (4) The system shall be able to provide student scoring information to the schools and/or systems for integration in the student management system.
 - (5) The Contractor shall produce pre-coded student accountability demographic data information via laser-print bar code or labels on response documents for paper testers.
 - (6) The system shall include all demographic data as detailed in Contract sections A.7.aa(15) and A.8.f.(3)vi. Uploaded data may also be used to pre-code teacher license information on response documents and TAGS. Bar codes shall include all available demographic information for each student as well as school and system identification information. Student response documents shall be pre-coded with all possible demographic information.
 - (7) The Contractor agrees to collaborate with the State for the modification/revision/customization of the pre-id program as needed to meet State criteria.

A.12. Assessment Processing Activities

The Contractor shall provide the State with processing activities as defined in Contract section A.12.a-k for scanning, editing, scoring and reporting of the TCAP Assessments. The accurate and consistent processing of assessments is the key component in maintaining the reliability



and integrity of the TCAP Assessments. The Contractor shall assist the State in processing activities for the TCAP Assessments according to timelines established in Contract section A.4 and the annual Work Plan.

The Contractor will implement processing procedures that are reliable and valid (as defined via Psychometric Activities in A.7) as well as efficient in terms of time and expenditures (as defined by annual Work Plan deliverable dates). The Contractor shall provide procedures and support for all assessments including the following:

- a. The Contractor shall provide systems to facilitate processing, scoring, and reporting student results from each administration. The system shall include a plan to verify the accuracy of data produced during each processing step for each administration including the ability to disaggregate and aggregate the results.
- b. The Contractor shall collaborate with the State to evaluate test processing and develop programs and services to improve test processing functions. The Contractor shall assist the State to create and redefine test processing procedures to improve productivity, efficiency, data turnaround times, reporting and accountability.
- c. The Contractor shall provide, at the request of the State, all publications required under the Contract in agreed upon electronic formats to the State.
- d. The Contractor shall work with the State or any State appointed vendor to facilitate and support scanning, editing, and scoring (including hand scoring) of assessments at alternate sites as designated by the State.
- e. For quality assurance and score verification purposes, mock testing data must be generated and utilized in all aspects of processing, scanning, editing, scoring, reporting, and printing and must be completed and evaluated by the Contractor and the State before the beginning of each test administration. The Contractor shall supply a test deck that has been through quality assurance and score verification for the State to use for comparison purposes. The Contractor shall provide programming to ensure that all test deck information, including data from State created test decks, is not included in operational data for reporting. The Contractor shall work with the State and the State's technology vendor in the development of an end to end test integration plan for both paper- and computer-based testing that includes: generation of data from testing source through transmission of test data, including image files, to the EdTools platform for processing. Processing on EdTools includes: Ordering, School Group Lists, Class Rosters, Reports of Irregularity, Student Demographic Data Verification, Teacher-Student linkages and delivery of Quick Scores. A minimum of 150 mock response documents and/or computer-based test records per content area per assessment will be coded to verify the following:
 - (1) Each grid area is properly scanned and recorded,
 - (2) Each response area is being scanned and mock response documents for each version will be gridded to show each of the response choices is being scanned correctly,
 - (3) Student demographic information including some from pre-identification files,
 - (4) All cases involving missing and incorrect information will be checked,
 - (5) All cases requiring editing are properly relayed to the State,
 - (6) Any other procedures to assure accuracy of data processing,
 - (7) Verification of absent, medical exempt, EL exempt or nullified scores for processing,
 - (8) Scoring keys and scoring programs,
 - (9) Students who have moved during or between test administrations, and
 - (10) Records for students who were not tested are handled appropriately.
- f. The Contractor shall develop a plan to provide a description of editing data uploaded into the computer-based testing platform and/or printed on response/demographic documents and TAGS to verify the following:



- (1) Double marks or inaccurate precoding of printed information,
 - (2) Coded incorrectly with respect to student, school, or system identification,
 - (3) Documents deemed unscorable for some reason,
 - (4) Rules for editing each field on the student response documents, noting which will be flagged, hand-checked, and connected where necessary, and which fields will rely on scanner discrimination rules and not be hand-edited,
 - (5) Materials used for training editors will be included in the plan, and,
 - (6) A description of the edit reports that will be produced to show what documents need editing, all changes made, the outcome of edits, and the procedures for monitoring the edit changes.
- g. The Contractor shall work with the State or any State appointed vendor to facilitate and support the use of online applications from the State's website in editing for all Reports of Irregularity (RIs) including: Nullifications, Voids, Did Not Attempt, Breach of Security, and Medical Exemptions.
- h. The Contractor will provide a data file for each administration to the State for production and quality control purposes. The data file shall meet the following criteria:
- (1) Verify that student response documents have been correctly scored, and that all final score values have been properly calculated (e.g., scale scores and proficiency level),
 - (2) Monitor (in conjunction with State staff) all aspects of scanning, editing, and scoring throughout the time that the actual response documents are being scanned, edited, scored and processed until completion, and
 - (3) Develop a data verification plan for each administration that describes in detail all steps to be implemented to ensure that the final reports of results are accurate.
- i. The Contractor shall submit scanned/edited data and data generated through the computer-based testing platform to the State or a State vendor in a mutually agreed upon file format that facilitates the generation of State required reports.
- j. The Contractor shall support the State and its designees in preliminary verification of scoring and test equating using a calibration sample of approximately the first 5,000-16,000 (not less than 20%) student records processed per grade and/or content area per assessment. The systems and number of students used in the calibration sample shall be approved by the State. This sampling must represent the approximate demographics of the State. The student response documents from these systems will be scored and all of the files and reports identified will be generated by the State and the Contractor. These files and reports will then be verified independently by the Contractor and the State for comparison data and equating of form confirmation.
- k. The Contractor shall provide to the State for review and written approval a processing plan that includes the return of the assessments to the Contractor for scanning, editing, scoring, and reporting. At a minimum the plan shall provide details for online and paper testing and shall include:
- (1) Scoring methodology,
 - (2) Score reporting,
 - (3) Generation and maintenance of scoring data files,
 - (4) Quality assurance procedures for each part of the scoring process,
 - (5) Specifics of the process for scoring all student responses for multiple-choice,
 - (6) Details the process of handling online responses for both CR and SR items,
 - (7) Specifics of the process for handling paper CR responses,
 - (8) Identify the qualifications and training of key personnel involved in this process,
 - (9) Use Optical Mark Reading (OMR) equipment to scan student response documents,



- (10) Provide verification of quality control procedures for each scanner,
- (11) Provide documentation of editing procedures for response documents and TAGs, for State review and approval. The documentation shall include rules for editing each field on the student demographic sheet. Materials used for training editors shall be provided to the State for review and approval,
- (12) Provide edit reports that include all edits needed, changes made, and procedures used for monitoring edit changes, including edits for RIs,
- (13) Work with the State to establish State monitored quality reviews and provide logs/reports regarding the quality control procedures to the State for review and approval, and
- (14) Submit to the State for review and approval quality control procedures for all scoring processes and products. The procedures shall include:
 - i. Steps to ensure that all assessment materials are correctly and reliably scored,
 - ii. Quality control review of all phases of production related to scanning student response documents,
 - iii. Verification of the scoring program, editing, and resolution procedures for questionable response documents (for example, with multiple marks, poor erasures, poorly recorded oral responses or incomplete data),
 - iv. Verification of delta reports for data changes made during Student Demographic Data Verification (SDDV) phase in EdTools,
 - v. Quality control review of all phases of production related to reporting and generating data files from the results.

A.13. Scoring Activities

The Contractor shall provide scoring services for the TCAP Assessments. Accurate and consistent scoring of responses is a key component in maintaining the reliability and integrity of the TCAP Assessments. The Contractor is required to maintain high levels of scoring accuracy while meeting scoring deadlines. The Contractor shall score the TCAP Assessments according to timelines established in Contract section A.4 and the annual Work Plan.

The Contractor will implement scoring processes that are reliable and valid (as defined via Psychometric Activities in A.7) as well as efficient in terms of time and expenditures (as defined by annual Work Plan deliverable dates). The Contractor shall provide scoring procedures and support for all assessments including the following:

- a. The Contractor shall provide programming and support for scoring of all test versions including online, Large Print and Braille.
- b. The Contractor shall maintain sufficient capacity to facilitate re-scoring of response documents. Procedures for re-scoring student response documents shall be developed in collaboration with the State.
- c. The Contractor shall provide test scoring keys to the State as part of the test specifications as listed in Contract section A.6.d. Scoring keys shall be provided to the State separately for use in verifying the test deck used for scanning and processing and shall contain correct responses for all items including field test items. Scoring keys will be validated through test deck and psychometric review, any errors shall be corrected and scoring tables updated. Scoring keys will be finalized and approved in collaboration with State staff and/or State vendors. The test scoring keys shall include:
 - (1) Item reference number,
 - (2) Item type,
 - (3) Item location,
 - (4) Correct response(s) for multiple-choice, multiple select, and TEI items, and
 - (5) Scoring tools for constructed response items requiring gridded response, short



answer or other response types that meet scoring rules established during item and test form design and approved in collaboration with the State.

- d. The Contractor shall provide quality assured, production and operational programs for scoring and reporting services including operational test decks and response keys. The Contractor shall also provide quality assured technical information required to provide and facilitate onsite and off-site test processing and reporting. These services shall include the following:
- (1) Scoring
 - i. Use a methodology technically appropriate and approved by the State to produce a single scale score for each grade level and/or content area tested.
 - ii. Provide assessment data in requested formats which will be used to determine various scores, data distributions and summaries to support the State approved reports.
 - iii. The Contractor is responsible for verifying that student response documents are correctly scored. A test deck as defined in Contract section A.12.e shall be provided prior to each administration for each assessment that has been through quality assurance for the State to use for comparison purposes.
 - iv. The Contractor shall develop guidelines and provisions for tracking student scores at the local level. Delineate Contractor/State/EA responsibilities including record retention, following mobile students, and monitoring students who are below proficient in content area tests.
 - (2) Data Gathered
 - i. Collect all individual data through student data uploads into computer-based testing platform and/or from the response document to include: item responses and scores, including commodity and or litho codes, demographic data, number of attempts, login information, length of time tested online, and all other fields.
 - ii. Gather information regarding test security procedures and safeguards including: serial numbered booklets, confidentiality agreement forms, erasure data, key/re-key information, etc.
 - (3) Document Retention
 - i. Test Review Procedures shall include confirmation of a below proficient score and re-scoring under certain conditions.
 - ii. Test documents, scoring keys and student data shall be retained in a secure electronic format on secure servers for the duration of the Contract.
- e. The Contractor shall establish scoring tools and rubrics that align with the expectations of the standards at each grade level. The Contractor shall establish an efficient and accurate scoring methodology for constructed response assessments for prompt based texts, writing, mathematic tasks requiring explanation or modeling, or other activities that require students to give written work. The methodology may include scanned materials scored via computer using programmable scoring technology, hand scores as detailed in this section below or a hybrid model combining hand scores with technology. The Contractor will implement scoring processes that are reliable and valid (as defined in Psychometric Activities in A.7) as well as efficient in terms of time and expenditures (as defined by the annual Work Plan deliverable due dates). The Contractor shall provide scoring procedures for all constructed response assessments including the following:
- (1) Scoring of CR items shall include a minimum of two human readers. The Contractor may include the use of computer generated scores for comparison. CR items must have an inter-rater exact score agreement of .70 with human and computer scores for reliability and validity. The Contractor shall provide a report of results for the comparability study to include security between paper and pencil versus computer based testing.



- (2) Provide confidentiality agreements for participants in all scoring meetings; all participants must express understanding of the expectation that they are not to discuss or reveal the contents of the items, results of the assessment, student responses, student demographic information or any other information pertinent to the development, processing, scoring or reporting of the assessments.
- (3) Establish rubrics and scoring tools that clearly define what students will be expected to produce in order to receive full or partial credit.
 - i. The Contractor shall provide the State final scoring tools at least six months prior to the administration of the operational assessment.
 - ii. Rubrics will be shared in a form that can be shared with educators, parents and students without compromising the security of the assessment.
- (4) Establish anchor, qualifying, and training sets as follows:
 - i. The Contractor shall provide the State with sample papers for each assessment.
 - ii. The Contractor shall conduct range finding meetings for the purpose of establishing anchor and qualifying sets to be used in scoring the TCAP Assessments. The State will provide TN educators and expert consultants to participate in the meetings.
 - iii. The range finding meetings shall take place in a location mutually agreed to by the State and Contractor according to guidelines established in Contract section A.6.h.(8).xi-xvii. The State will provide TN educators as participants in the meetings for each grade level and/or content area being hand scored. Dates for the meetings shall be established in the annual Work Plan.
 - iv. The Contractor shall be responsible for all meeting expenses, including honorariums for expert consultants, according to guidelines established in Contract section A.6.h.(8)xvii.
 - v. The Contractor's project manager or designee will be present at meetings for overall consultation purposes. The Contractor will provide the appropriate content, statistical, psychometric, and other professional staff to participate in each of the meetings.
 - vi. Contractor staff shall assist State staff and expert consultants in reviewing the recommendations of the range finding committee for the assessments. These reviews shall finalize the student responses to be used for the anchor and qualifying sets for each grade level/cluster.
 - vii. The range finding meetings shall establish the anchor, qualifying and trainings sets to be used in scoring the TCAP Assessments. The Contractor shall provide 75 papers per grade and/or content area for the creation of the sets. These sets are defined as:
 - a) Anchor set – Minimum of four student responses for each score point at each grade level/cluster. The anchor set shall consist of the best examples available for each score point. There shall be one anchor set per assessment. The anchor set shall be scanned to an electronic file and posted on the State website after scoring has been completed.
 - b) Qualifying set – Minimum 12 student responses that cover the full range of score points for each grade level/cluster.
 - c) Training set – Minimum of 12 student responses that cover the full range of score points for each grade level/cluster. Training sets shall be developed by the Contractor and State staff as needed during live scoring. Training sets shall be used for validity, calibration, and recalibration in working with readers during the scoring process.
 - viii. The Contractor shall provide sufficient numbers of copies of the anchor, qualifying and trainings sets to be used in training and scoring the TCAP



Assessments.

- (5) Requirements for key scoring personnel include the following:
- i. The individual assigned to oversee the project must have at a minimum a four-year college degree and experience with writing assessment scoring and with large-scale (more than 150,000) statewide public school performance assessments of students (K-12). The Scoring Project Director must be able to establish and maintain appropriate standards throughout the scoring phase of the project. Additionally, he/she must be able to explain the subtleties of scoring, and to be firm in their application. The Scoring Project Director is responsible for ensuring that all questionable papers/responses (including off-topic, illegible, refusal, another language, and alert papers) are immediately sent to the State via email or other secure method on the day that the readers identify them. The Scoring Project Director will be ultimately responsible for TCAP Assessment scoring.
 - ii. All staff assigned to oversee scoring processes must have a four-year college degree and prior experience with the different methods of evaluating large-scale performance assessments. The State prefers individuals who have led reader groups for similar assessment projects of this size and have experience teaching the grade/content areas that they are monitoring. All involved with scoring will be required to adhere to scoring standards, to resolve problems created by prompts, scoring guides, individual differences in interpretation, and to be sure that the readers score papers according to scoring standards. They must administer reader training that minimizes the need for retraining by maximizing reader agreement.
 - iii. The Contractor shall use a screening process for hiring readers that includes an interview and an evaluation of the applicant's written response to sample prompts. Readers will be expected to maintain a inter-rater reliability rate both with the scoring personnel and with the State. The Contractor shall adhere to the following guidelines in hiring and maintaining readers:
 - a) Minimum of a four-year college degree
 - b) Cross section of readers in terms of age, ethnicity, and gender
 - c) As part of the screening process all potential readers must sign a statement indicating that they agree to the following conditions:
 1. Applicants who do not successfully complete the training and qualifying requirements, will not be hired as readers,
 2. Readers may be retrained or dismissed if, after being trained to score, their scoring performance does not meet the requirements of the State and Contractor,
 3. Readers must commit to score for the duration of the scoring session,
 4. Readers who are absent from scoring for two or more consecutive scoring days, must repeat the training and qualifying procedures, and,
 5. All readers must sign a confidentiality agreement approved by the State.
- (6) The Contractor shall establish a method for managing and monitoring the effectiveness of scoring. All logs shall be provided to the State on a daily basis.
- (7) Conduct reader training using the established anchor, qualifying and training sets as defined in Contract section A.13.e.(4)vii. Training procedures may include the following:
- i. The Contractor shall conduct training according to timelines established in Contract section A.4 and the annual Work Plan. All costs associated with training shall be at the Contractor's expense.
 - ii. State staff and expert consultants will have the opportunity to be present during



team leader/reader training and the beginning of scoring the TCAP Assessments using guidelines established collaboratively between the State and the Contractor.

- iii. Anchor, qualifying, and training sets may not be changed or substituted without notification to the State.
 - iv. Training of key personnel shall be conducted over a minimum of two days followed by Reader training also over a minimum of two days. Training for each grade level/cluster and each assessment shall be conducted independently.
 - v. All key personnel as outlined in Contract section A.13.e.(5).i and ii must qualify using the criteria for readers as established in Contract section A.13.e.(5).iii and shall become familiar with the anchor, qualifying, and training sets. Team Leaders shall conduct reader training using only State standards under the direction of the Project and Room Directors with Contractor staff in consultation with State staff and expert consultants. Contractor staff must agree to cooperate fully with State personnel who will monitor the training and scoring operations.
 - vi. Contractor and State staff shall establish criteria for qualifying readers that shall include the following:
 - a) Training will include scoring of both paper-based and online student responses for all assessments,
 - b) Each reader shall receive copies of anchor, qualifying, and training sets that are easily readable, materials must remain in assigned scoring rooms,
 - c) Readers shall read and score at least six qualifying sets,
 - d) Readers must pass at least two qualifying sets, one with no less than seventy percent (70%) perfect agreement with thirty percent (30%) adjacent scores and a second with no less than eighty percent (80%) perfect agreement with twenty percent (20%) adjacent scores,
 - e) Score sheets for each reader reflecting scores for all qualifying sets shall be inspected by State staff, and,
 - f) Training methods shall ensure that all State standards are met during scoring. Using any other scoring rubrics, scoring philosophies, or altering scores on the State scored anchor, qualifying, or training sets shall be considered a breach of the contract.
 - vii. The Contractor must anticipate some loss of readers during training and qualification and increase counts of readers to a level sufficient for completing scoring tasks on schedule.
- (8) Score student response documents according to the following criteria:
- i. The Contractor shall establish an efficient and accurate scoring methodology. The finally agreed upon scoring method may include scanning student response documents and using either in-person scoring or a distributive scoring model.
 - ii. TCAP item responses shall be scored independently by two readers using Blind Responses and Blind Scoring methods. The Contractor shall develop a specific set of scoring rules for resolving disagreement between first and second readings with third and, infrequently, fourth readings and for calculating final scores.
 - iii. The Contractor must ensure that the Project Director and other management personnel maintain effective communication and cooperation with the State throughout each stage of scoring.
 - iv. The Contractor shall develop and implement an efficient process to group student essays for scoring.
 - v. The Contractor shall be responsible for scoring all student essays using the students' actual responses and the specific scoring criteria and methods



approved by the State.

- vi. The Contractor will develop a specific plan for scoring procedures including the following basic elements:
 - a) Definition of roles and responsibilities of personnel,
 - b) Flow of student essay papers/portfolios through the scoring process,
 - c) Scoring methodology, use of site-based or distributed hand scorers,
 - d) Assignment of scores to papers/portfolios,
 - e) Resolution of scoring problems,
 - f) Retraining of readers,
 - g) Monitoring and maintaining reliability of scoring and quality control throughout the process, and
 - h) Documentation of all reader trainings, scores, re-scores, and scoring issue resolutions.
- vii. Quality-control reader statistical reports must be provided to the State by the Contractor daily and, at a minimum, include the number of readings, the number of papers read per reader per day, the total number of papers read each day, the distribution of scores, the number of third readings/scorings, and the number of non-scoreable papers. Statistics on non-scoreable papers will also include the reason that the paper was not scoreable, i.e. limited, non-English, non-responsive to the prompt, etc.
- viii. During TCAP scoring, the Contractor must produce daily and cumulative reader scoring reports. The Contractor should have the capability to reproduce any of these reports on request. Readers' identification numbers, student scores, and number of readings for various reports are required. These reports will be made available to team leaders and the scoring director. The Contractor and State will work together annually to determine the format of these reports. These reports will provide the following information:
 - a) Daily Summary - Indicating prompt, number of readings, percent agreement, resolutions, point distribution, and breakdown of valid and invalid scores. These reports include inter-rater agreement, reader production rate statistics, score-point distribution by reader, reliability statistics by reader, and score distribution by grade.
 - b) Cumulative Summary - A summary of the number of readings, percent agreement, resolutions, point distribution, and breakdown of valid and invalid scores sent daily to the State.
 - c) Cumulative Breakdown of Average Scores - Indicates the average scores for the readers. Checked daily by the team leaders and room leaders, and sent weekly to the State.
 - d) End of Scoring Report - Indicates by grade the n-count and percent for each score point.
 - e) End-of-Scoring Cumulative Summary - A total summary of the number of readings, percent agreement, resolutions, and breakdown of valid and invalid scores.
- ix. Read behinds will be conducted to assure validity of scoring. Calibration and retraining of affected readers will take place as needed and rescoring will take place as necessary.
- x. The Contractor must demonstrate the attainment of the minimum reliability and validity standards as established in Contract sections A.7.g-l., A.7.q-t, and A.7.y.(2)-(5). State staff shall review calibration reports on a regular basis.



- xi. The Contractor must provide at least seventy percent (70%) inter-rater reliability both with scoring personnel and with the State on a daily basis.
 - xii. If inter-rater reliability criteria are not met, the State may require the Contractor to rescore the student responses or may at any time require student responses scored by a particular reader to be rescored if the reader's statistics show greater than the five percent resolutions required. Readers may require retraining or dismissal if the scoring process is not followed.
 - xiii. The Contractor must provide the State a copy of all student papers about which questions have been raised. This includes papers with anomalous scores, papers which are non-scoreable as defined by the Condition Codes (see Contract section A.13.e.(9)), compositions which are considered an "Alert," (see Contract section A.13.e.(9)) and compositions which might indicate administrator interference. Additional pages of student written work that accompany the answer document will not be scored.
- (9) The Contractor shall develop Condition Codes for identifying non-scorable responses and a system of coding these responses. Condition Codes may be Alpha or Numeric and should be defined in the scoring rubrics. In addition, the Contractor will develop a system for flagging alert status papers which indicate a serious or potentially serious problem for the writer (physical/sexual abuse, drug use, gang involvement, running away, suicide, severe anti-social tendencies, etc.). When such a paper is identified, it must be transmitted immediately to the State. The State will then notify the appropriate system personnel. These papers, as well as all others, shall be treated as strictly confidential.

A.14. Assessment Reporting Activities

The Contractor shall produce score reports at the individual student level as well as summary reports at the teacher/class, school, EA, and State levels, including any needed subgroups, as defined in Contract sections A.7.aa(15) and A.8.f.(3).vi. The State shall provide the Contractor with report mockups that have been reviewed by public focus groups for use in report design. The State shall be involved at each step of report design and shall have final signoff on layout, data, and text presented on all reports. The Contractor shall work in consultation with the State's item and test development vendor as needed to ensure accurate reporting. The Contractor shall collaborate with the State's item and test development vendor prior to development of test blueprints for report design on all new assessments. The Contractor shall utilize a single, unique and accurate TN state-assigned student ID number and the student's current school and EA unique code identification number at the time of testing on both Part I and Part II. Reports may be designed and developed for each assessment and/or each test year separately. All reports shall be submitted to the State for review and approval prior to distribution.

- a. The Contractor shall provide technical training, support, required programming and software, including installation and upgrading of proprietary software and programming, to the State necessary to furnish EAs with student scores and State approved reports. The software shall produce student scores in an easily updated electronic format. The Contractor shall provide written assurance of confidentiality and appropriate security measures to ensure student data is protected. All data security requirements as outlined in Contract sections A.9.a and A.10.I shall be met for reporting.
- b. The Contractor shall work with the State and other State vendors to facilitate required services.
- c. The Contractor shall score and report student scores from delivery of late test materials. These late tests or straggler documents, returned by EAs after deadlines established for summary data aggregation, shall be processed by the Contractor. The Contractor shall provide final student level reports as defined in Contract section A.14.j.(6) in both printed and online formats. The student data for late tests shall be made available for ad hoc reporting but shall not be included in summary reports.
- d. The Contractor shall be responsible for shipping all printed student level reports and labels



with parent brochures at a 1:1 ratio to each EA and the State. Reports for home school students shall be sent to the State Home School Coordinator. Printed reports shall be organized and packaged according to State specifications.

- e. The Contractor shall be responsible for compliance with the confidentiality provisions of the Family Education Rights and Privacy Act (FERPA), 20 USC 1232g, 34 CFR 99, Attachment A, the National School Lunch Act 42 USC 1758 (b) (2) (c), the Data Accessibility, Transparency and Accountability Act TCA § 49-1-701, and any other State or federal laws, rules, or policies intended to protect individual privacy in all cases. These data shall only be included in data files provided to the State. In addition, the protection of pupil confidentiality shall uphold the ethics procedures that are usual and customary within the profession.
- f. The Contractor shall provide a web-based online reporting and report delivery system. The system shall meet the same specifications and support requirements of other online products as defined in Contract sections A.10. and A.11.a & b. Reports shall be designed to meet State and federal reporting requirements and may be revised as needed after each administration. Customized backer text may be included for each report.
- g. The online reporting and report delivery system shall provide the following programming:
 - (1) An online help section that provides users with a searchable database that can be used to answer most usability and technology questions. The help section shall include: GTI, tutorials, user's guide, training materials, a quick reference guide, frequently asked questions, and links to State and other reference websites. The customer support phone numbers and email addresses shall be posted in the help section.
 - (2) An administrative section that will allow State, EA, and school administrators to manage all user accounts within their authoritative domain. Provide security measures to include user hierarchy as defined in Contract section A.11.a.(2). This section shall include usage reporting to indicate when/if users have logged in and what reports they have viewed, downloaded, or created.
 - (3) A downloads section that will allow users to download all data and reports based upon user security level.
 - (4) A notification section that will allow the Contractor and the State to post information concerning the reports for users to view and/or print. The State issues an embargo on certain data until its official release by the State; this notice and others may be posted on the web-site.
 - (5) All electronic files and web-based programming shall be compatible with Windows and Macintosh applications as specified in Contract section A.10.h. The Contractor shall provide the State with technical specifications required for any online applications.
 - (6) Final data shall be uploaded after Student Demographic Data Verification (SDDV) review, editing, and scoring have been completed using the EdTools platform. Data uploads shall be considered complete after EA staff have completed SDDV and State staff have completed editing and review.
 - (7) Interactive ad hoc reporting may be customized to allow users to select data based upon various criteria (including all subgroups and demographic data as defined in Contract sections A.7.aa.(15) and A.8.f.(3)vi. and create custom reports for use in activities including: re-rostering for future classes, student intervention, school improvement plans, and federal reporting requirements.
 - (8) Each customized report, as it is viewed on the screen, will be capable of rendering in a PDF format through a print function. The customized report may be printed in hard copy or downloaded to the desktop or CD.
 - (9) The online reporting system shall provide historical PDF reports and available data files in a separate archive. There is no expectation that such data shall be available for interactive reporting.



- (10) The online reporting system archive with limited technical support shall remain available until contract end date).
- h. Report designs shall be reviewed by the State and the Contractor at a minimum of once per test year. The Contractor shall make any required changes to report design, including modification of data presentation, backer text, and/or creation of new reports, to meet State needs and/or federal guidelines. Significant design changes shall be defined as comprehensive revision of overall report format and layout or addition/deletion of more than five data sets.
 - i. Technical Report – The Contractor shall develop, produce and provide a technical report for each assessment as defined in Contract section A.7.aa. The technical report shall be supplied in both PDF and Microsoft Word, appendixes containing data may be provided in Microsoft Excel or other agreed upon data software. The Technical Report shall be submitted to the State electronically for review and approval. Any discrepancies are to be immediately adjusted by the Contractor at the Contractor's expense to the State's satisfaction. The State's item and test development vendor shall provide any necessary item or test form information and consultation required to make corrections. An electronic version shall be posted via web-services as well as five electronic copies on CD and ten bound paper copies of each technical report shall be submitted to the State after final approval.
 - j. The Contractor shall provide customized Student, Teacher/Class, School, EA, and State level reports including the following:
 - (1) The Contractor shall include certain common information on all reports including: report name, time of administration (i.e. Fall 2016) and/or test date, assessment name, grade and/or content area, test form, including modified version if applicable, teacher name, school name and EA name. Separate reports may be required for Performance Standards and/or State accountability as defined in Contract section A.2.pp.
 - (2) The data from paper and computer-based test-takers shall be aggregated together at the school, EA, and State levels for operational tests. The Contractor shall use encryption to ensure security of the assessments and all student information entered through the program online.
 - (3) The scores and data from Parts I and II shall be combined for a single scale score and reported as one assessment.
 - (4) Reports shall include scoring information for all selected and constructed response items.
 - (5) The Contractor shall assist the State in the composition of a response to any challenges to student scores, scoring rubrics, and/or scoring methodologies after reports are made public.
 - (6) Student Level Reports – The Contractor shall produce and distribute student level reports that include raw scores, scale scores, sub-score category information and achievement levels for each content area. Scores must be displayed both numerically and graphically with written explanations.
 - i. Student label – Pre-printed label for student permanent record indicates scale score for Performance Standards as defined in Contract section A.2.pp, student's scale score, achievement level, and number correct for each content area. Includes student name, date of birth (DOB), ID number, administrator/teacher name, class period and grade level. Labels shall be provided on sheets and sorted at a minimum of content area by teacher. Labels shall be provided in PDF in the online reporting system for printing at the school and EA level. Labels shall be standard size and specifications of the labels will be provided with instructions for printing.
 - ii. Individual Student Report (ISR) – Pre-printed report forms on which student's scores are reported. Reports shall include student name, ID number, DOB, other



category and for the content area overall. Static PDF reports shall include number of students tested, absent, exempt (medically or EL), nullified, refusal/did not attempt and student grade level. Performance level summary report information shall include graphic representation and explanation of all students per content area in each performance level for each school and EA. Students will be listed alphabetically by performance level per content area with number correct and scale score on class and/or school level reports. Absent, exempt (medically or EL), nullified, refusal/did not attempt students shall be listed separately. Students shall not be listed at the EA or State level. Separate reports shall be provided at the class, school, EA and State levels. Interactive online ad hoc reports shall allow for the creation of custom summary reports for use in school improvement planning, teacher evaluations, teacher mentoring, school teams and other reporting as needed.

- iv. Disaggregation summaries – Reports containing average percent of students by performance level by sub-score category in various groups of students based on demographic variables as defined in Contract sections A.7.aa.(15) and A.8.f.(3)vi including: gender, race, ethnicity, disability category, economically disadvantaged status, EL status, accommodation usage, migrant, and any other category collected from student accountability demographic data. Interactive online ad hoc reports will allow for the creation of custom summary reports that may be sorted on any single or combination of available demographic categories for use in various analyses and for various purposes, including school improvement planning and other State or federal reporting. Separate reports shall be provided at the school, EA and State levels.

(8) Electronic Student Data Files – The Contractor shall:

- i. Provide the State an electronic comprehensive data file (CDF) containing the complete record of student demographic, item response, and score data of all students to be aggregated by content area for each school, EA, and the State. Files shall be delivered on agreed upon timelines as established in the annual Work Plan. The CDF shall contain student data in a format which enables data to be disaggregated by any and all fields on the student demographic form. Statewide summary data will also include item statistics.
- ii. Draft a layout for this file for review, revision and finalization. The Contractor shall work with the State to define data elements and field lengths for all files.
- iii. The Contractor shall work with the State and the State's technology vendor to ensure all data for Parts I and II are correctly merged and appropriately reported. Prior to submission to the State, the Contractor is responsible for checking to ensure that all files are consistent and accurately reflect the data provided on reports.
- iv. Post the CDF to the secure SharePoint or SFTP website as detailed in Contract section A.4.a(1) for review and approval by the State. A final CDF shall be posted to the secure SharePoint or SFTP website after written approval by the State Psychometrician. The Contractor shall provide five copies of the final CDF via CD shipped to the State and the State Psychometrician via certified carrier.
- v. A comprehensive file shall be provided for each assessment, content area and administration at the end of the test year and delivered on timelines established in the annual Work Plan.
- vi. Provide data files for the EAs via the online reporting system. Data files shall download raw data in a format approved by the State, i.e. csv, HTML, XML, or text. The EA data files shall be an abbreviated form of the State CDF and shall contain the student records for all students in the system. EA data files shall provide data for each student by school. Item data shall not be included in the EA data files. The State shall approve the file format and layout.
- vii. Check the accuracy and consistency of all student level data on data files before



submission to the State. This includes:

- a) Ensuring all students tested are included,
 - b) Ensuring that all demographic fields are included and are accurate reflections of the test answer documents,
 - c) Braille and Large Print, student records are coded correctly,
 - d) All data is included accurately in the printed reports and data files, and
 - e) All RIs, including absentee, exempt (medically or EL), nullified, and/or refusal/did not attempt records are included appropriately in the data.
 - f) The State will independently verify the consistency and accuracy of the data files. Any discrepancies are to be immediately adjusted by the Contractor at the Contractor's expense to the State's satisfaction.
- (9) Interpretive Guides – The Contractor shall:
- i. Develop, print, and distribute parent brochures for interpretation of individual student score reports as defined in Contract section A.8.e.(7).
 - ii. Provide comprehensive guides as defined in Contract section A.8.e.(7) that are clear and easily understood by students, parents, teachers, and administrators,
 - iii. Provide assistance to the State and EAs on the interpretation and use of summary test results for program evaluation and accountability,
 - iv. Provide all thumbnails, graphics, and other content to the State for use in training materials in original format, and
 - v. Post guides in the help section of the online reporting program.
- k. The Contractor shall provide customized reports on paper, PDF, CD, and/or online format for each assessment based upon the following report matrix:
- (1) Student Level Reports – One paper copy with post-test parent brochure, and PDF print-on-demand via online reporting.
 - (2) Student Label – One paper copy (on sheets) and PDF print-on-demand via online reporting.
 - (3) School Level Reports – One copy of each Class Roster and all Summaries at school level and 1 copy of each Class Report and Summary at EA level PDF print-on-demand, and interactive ad hoc reports via online reporting.
 - (4) EA Level Reports - One copy each of Class Rosters, all School and EA Summaries at EA level and one copy of each EA Summary at State level PDF print-on-demand, and interactive ad hoc reports via online reporting.
 - (5) State Level Reports – One copy of each School and EA Summary Report and the State Summary at State level PDF print-on-demand, and interactive ad hoc reports via online reporting

A.15. Warranty. Contractor represents and warrants that the term of the warranty (“Warranty Period”) shall be the greater of the Term of this Contract or any other warranty general offered by Contractor, its suppliers, or manufacturers to customers of its goods or services. The goods or services provided under this Contract shall conform to the terms and conditions of this Contract throughout the Warranty Period. Any nonconformance of the goods or services to the terms and conditions of this Contract shall constitute a “Defect” and shall be considered “Defective.” If Contractor receives notice of a Defect during the Warranty Period, then Contractor shall correct the Defect, at no additional charge.

Contractor represents and warrants that the State is authorized to possess and use all equipment, materials, software, and deliverables provided under this Contract.



Contractor represents and warrants that all goods or services provided under this Contract shall be provided in a timely and professional manner, by qualified and skilled individuals, and in conformity with standards generally accepted in Contractor's industry.

If Contractor fails to provide the goods or services as warranted, then Contractor will re-provide the goods or services at no additional charge. If Contractor is unable or unwilling to re-provide the goods or services as warranted, then the State shall be entitled to recover the fees paid to Contractor for the Defective goods or services. Any exercise of the State's rights under this Section shall not prejudice the State's rights to seek any other remedies available under this Contract or applicable law.

- A.16. Inspection and Acceptance. The State shall have the right to inspect all goods or services provided by Contractor under this Contract. If, upon inspection, the State determines that the goods or services are Defective, the State shall notify Contractor, and Contractor shall re-deliver the goods or provide the services at no additional cost to the State. If after a period of thirty (30) days following delivery of goods or performance of services the State does not provide a notice of any Defects, the goods or services shall be deemed to have been accepted by the State.

B. TERM OF CONTRACT:

This Contract shall be effective for the period beginning on July 13, 2016 ("Effective Date") and ending on November 30, 2018, ("Term"). The State shall have no obligation for goods delivered or services provided by the Contractor prior to the Effective Date.

- B.1 Renewal Options. This Contract may be renewed upon satisfactory completion of the Term. The State reserves the right to execute up to three (3) renewal options under the same terms and conditions for a period not to exceed twelve (12) months each by the State, at the State's sole option. In no event, however, shall the maximum Term, including all renewals or extensions, exceed a total of sixty (60) months

C. PAYMENT TERMS AND CONDITIONS:

- C.1. Maximum Liability. In no event shall the maximum liability of the State under this Contract exceed one hundred fifty million dollars and zero cents (\$150,000,000.00) ("Maximum Liability"). This Contract does not grant the Contractor any exclusive rights. The State does not guarantee that it will buy any minimum quantity of goods or services under this Contract. Subject to the terms and conditions of this Contract, the Contractor will only be paid for goods or services provided under this Contract after a purchase order is issued to Contractor by the State or as otherwise specified by this Contract.
- C.2. Compensation Firm. The payment methodology in Section C.3. of this Contract shall constitute the entire compensation due the Contractor for all goods or services provided under this Contract regardless of the difficulty, materials or equipment required. The payment methodology includes all applicable taxes, fees, overhead, and all other direct and indirect costs incurred or to be incurred by the Contractor.
- C.3. Payment Methodology. The Contractor shall be compensated based on the payment methodology for goods or services authorized by the State in a total amount as set forth in Section C.1.
- a. The Contractor's compensation shall be contingent upon the satisfactory provision of goods or services as set forth in Section A.
 - b. The Contractor shall be compensated based upon the following payment methodology:



The following projected quantities were used to determine the evaluation factor for each fiscal year for each cost item line:
 Per Test = A Single Reportable Score per content area per student (A single test may be administered over multiple administration windows or subtests. A test will include 50-75 items worth 50-100 score points.)
 Per Administration = 2 (Fall and Spring)
 Per (Online) Application = 3 [Three functional applications are defined which encompass (1) computer based testing - including practice tools and enrollment/pre-id, A.8.c; A.8.f, A.11.c; (2) materials management (inventory), A.9.c; and (3) reporting, A.14.f-g.]
 Per Assessment Program = 3 (ACH, EOC, ALT)
 Per Content Area = Max 18 (12 EOC; 4 ACH; 2 Alt); ELA & Math Only (9 EOC and 2 ACH)
 Per Grade = 6 (3-8 for ACH; grades are not used for EOC)

GOODS OR SERVICES DESCRIPTION	AMOUNT (per compensable increment)
A.4. Schedule	
A.4.a. (1) Annual Work Plan	Per Work Plan
Year 1	\$5,741.52
Year 2	\$6,028.60
Year 3	\$6,330.03
Year 4	\$6,646.53
Year 5	\$6,978.85
A.4.a.(1) Annual Work Plan Review	Per Meeting
Year 1	\$17,278.82
Year 2	\$16,399.76
Year 3	\$19,049.90
Year 4	\$18,080.74
Year 5	\$0.00
A.5. Operations Management	
A. 5. a-g. Operations Management (includes administrative tasks, continuity activities, management meetings)	Per Assessment Per Content Area Per Grade Per Administration
Year 1	\$4,332.78
Year 2	\$4,408.95
Year 3	\$4,629.40
Year 4	\$4,860.87
Year 5	\$4,605.45
A.5.h. Program Support Services	Per Application Per Assessment Per Admin
Year 1	\$6,535.09
Year 2	\$5,403.99



Year 3	\$4,956.41
Year 4	\$5,013.84
Year 5	\$5,264.53
A.6. Development Activities (ELA and Math Only)	
A.6.d. Test Specifications (includes full item specifications A.6.e)	Per Assessment Per Admin
Year 1	\$328.95
Year 2	\$345.39
Year 3	\$362.66
Year 4	\$380.80
Year 5	\$399.84
A.6.g. Alignment Study	Per Report
Year 1	\$8,771.93
Year 2	\$9,210.53
Year 3	\$9,671.05
Year 4	\$10,154.61
Year 5	\$10,662.34
A.6.g. Additional Alignment Studies	Per Hour
Year 1	\$140.35
Year 2	\$147.37
Year 3	\$154.74
Year 4	\$162.47
Year 5	\$170.60
A.6.f, h-n. Test Construction (includes item and form development - expect approx. 55 total operational items per form, versions for field testing are not considered separate forms)	Per Selected Response Form
Year 1	\$146.20
Year 2	\$153.51
Year 3	\$161.18
Year 4	\$169.24
Year 5	\$177.71
A.6.f, h-n. Test Construction (includes item and form development - expect approx. 55 total operational items per form, versions for field testing are not considered separate forms)	Per Constructed Response Form (ELA only)
Year 1	\$146.20
Year 2	\$153.51
Year 3	\$161.18
Year 4	\$169.24



Year 5	\$177.71
A.6.h(8)xi-xxii Passage/Item Review Meetings	
A.6.h(8)xi-xxii Small Meeting (1 day)	Per Meeting (content area/grade group)
Year 1	\$2,245.61
Year 2	\$2,357.89
Year 3	\$2,475.79
Year 4	\$2,599.58
Year 5	\$2,729.56
A.6.h(8)xi-xxii Small Meeting (2-3 days)	Per Meeting (content area/grade group)
Year 1	\$3,368.42
Year 2	\$3,536.84
Year 3	\$3,713.68
Year 4	\$3,899.37
Year 5	\$4,094.34
A.6.h(8)xi-xxii Small Meeting (4-5 days)	Per Meeting (content area/grade group)
Year 1	\$4,491.23
Year 2	\$4,715.79
Year 3	\$4,951.58
Year 4	\$5,199.16
Year 5	\$5,459.12
A.6.h(8)xi-xxii Large Meeting(1 day)	Per Meeting (content area/grade group)
Year 1	\$3,438.60
Year 2	\$3,610.53
Year 3	\$3,791.05
Year 4	\$3,980.61
Year 5	\$4,179.64
A.6.h(8)xi-xxii Large Meeting (2-3 days)	Per Meeting (content area/grade group)
Year 1	\$73,058.53
Year 2	\$76,711.46
Year 3	\$80,547.03
Year 4	\$84,574.38
Year 5	\$88,803.10
A.6.h(8)xi-xxii Large Meeting (4-5 days)	Per Meeting (content area/grade group)
Year 1	\$6,023.53
Year 2	\$6,324.71



Year 3	\$6,640.94
Year 4	\$6,972.99
Year 5	\$7,321.64
A.6.h(8)xxiii Sight Reviews	
A.6.h(8)xxiii. Ink Print/Braille (1 day)	Per Meeting (content area/grade group)
Year 1	\$752.94
Year 2	\$790.59
Year 3	\$830.12
Year 4	\$871.62
Year 5	\$915.20
A.6.h(8)xxiii. Ink Print/Braille (2-3 days)	Per Meeting (content area/grade group)
Year 1	\$5,340.16
Year 2	\$5,607.16
Year 3	\$5,887.52
Year 4	\$6,181.90
Year 5	\$6,490.99
A.7. Psychometric Activities	
A.7.b Equating Study	Per Report Per Grade and/or Content Area Per Year
Year 1	\$10,500.00
Year 2	\$10,750.00
Year 3	\$10,750.00
Year 4	\$11,000.00
Year 5	\$11,000.00
A. 7. b-c & v. Research Studies	Per Hour
Year 1	\$156.14
Year 2	\$163.95
Year 3	\$172.14
Year 4	\$180.75
Year 5	\$189.79
A.7.u. Standard Setting (including the TAC mtg and correlation to previous assessment if necessary and the options for annual progress measure first year)	Per Grade and/or Content Area
Year 1	\$14,079.78
Year 2	\$6,578.95
Year 3	\$6,907.89



Year 4	\$7,253.29
Year 5	\$7,615.95
A.7.v. TAC Meetings (4-10 participants) 1-2 days	Per Meeting
Year 1	\$50,969.02
Year 2	\$53,517.47
Year 3	\$56,193.34
Year 4	\$59,003.01
Year 5	\$61,953.16
A.7.aa. Technical Report (including all equating procedures & results, calibration, scaling, reliability & validity, item analysis and alignment)	Per Assessment (includes electronic version, CDs and hard copies)
Year 1	\$10,526.32
Year 2	\$11,052.63
Year 3	\$11,605.26
Year 4	\$12,185.53
Year 5	\$12,794.80
A.7.kk. Comparability Study	Per Report
Year 1	\$3,122.81
Year 2	\$3,278.95
Year 3	\$3,442.89
Year 4	\$3,615.04
Year 5	\$3,795.79
A.8 Assessment Materials	
A.8.b Training Meetings and Materials	
A.8.b. (1) Introductory Materials for System Coordinators	Per Set
Year 1	\$95.35
Year 2	\$100.12
Year 3	\$105.12
Year 4	\$110.38
Year 5	\$115.90
A.8.b.(2) Introductory Materials for School Coordinators	Per Set
Year 1	\$18.00
Year 2	\$18.90
Year 3	\$19.85
Year 4	\$20.84
Year 5	\$21.88
A.8.b. (1 & 2) Training Meetings	Per Location



Year 1	\$13,974.51
Year 2	\$14,673.24
Year 3	\$15,406.90
Year 4	\$16,177.24
Year 5	\$16,986.10
A.8.b. (3) Materials for Regional Meetings	Per Set
Year 1	\$8.95
Year 2	\$9.40
Year 3	\$9.87
Year 4	\$8.52
Year 5	\$10.36
A.8.b. (3) Regional Meetings	Per Location
Year 1	\$12,063.53
Year 2	\$12,666.71
Year 3	\$13,300.04
Year 4	\$13,965.04
Year 5	\$14,663.30
A.8.c Preparation Materials	
A.8.c.(1) On-line Item Tools	Per Grade/Content Area /Assessment (3-11 only)
Year 1	\$0.00
Year 2	\$0.00
Year 3	\$0.00
Year 4	\$0.00
Year 5	\$0.00
A.8.c.(2) Practice test - Development (include electronic version, teacher directions, and 50-75 practice items)	Per Grade/Content Area /Assessment (includes Alt)
Year 1	\$707.39
Year 2	\$3,702.94
Year 3	\$779.90
Year 4	\$818.90
Year 5	\$859.84
A.8.c.(2) Practice Test Book	Per Book
Year 1	\$1.32
Year 2	\$4.14
Year 3	\$4.84
Year 4	\$5.08
Year 5	\$5.33
A.8.c.(2) Large Print Practice Test	Per Test
Year 1	\$184.21



Year 2	\$202.63
Year 3	\$241.78
Year 4	\$253.87
Year 5	\$266.56
A.8.c.(2) Braille Practice Test Development (include electronic version & teacher directions)	Per Grade/Content Area /Assessment
Year 1	\$137.47
Year 2	\$1,715.61
Year 3	\$151.56
Year 4	\$159.14
Year 5	\$167.09
A.8.c.(2) Braille Practice Test Book	Per Test
Year 1	\$1,250.00
Year 2	\$1,500.00
Year 3	\$1,500.00
Year 4	\$1,750.00
Year 5	\$1,750.00
A.8.c (2) Audio Practice Test development (master)	Per Grade/Content Area /Assessment
Year 1	\$61.78
Year 2	\$133.20
Year 3	\$68.11
Year 4	\$71.52
Year 5	\$75.09
A.8.c.(2) Audio Practice Test CD	Per CD
Year 1	\$6.00
Year 2	\$6.25
Year 3	\$6.50
Year 4	\$6.75
Year 5	\$7.00
A.8.d Modified Materials	
A.8.d.(1) Braille Test Development (Braille Book)	Per Grade/Content Area /Assessment
Year 1	\$1,905.85
Year 2	\$2,001.14
Year 3	\$2,101.20
Year 4	\$2,206.26
Year 5	\$2,316.57
A.8.d.(1) Braille audio development (master)	Per Grade/Content Area /Assessment



Year 1	\$126.86
Year 2	\$133.20
Year 3	\$139.86
Year 4	\$146.85
Year 5	\$154.20
A.8.d.(1) Braille Test Book	Per Test
Year 1	\$1,250.00
Year 2	\$1,500.00
Year 3	\$1,500.00
Year 4	\$1,750.00
Year 5	\$1,750.00
A.8.d.(1) i Braille audio CD	Per CD set/student
Year 1	\$15.30
Year 2	\$16.06
Year 3	\$16.87
Year 4	\$17.71
Year 5	\$18.60
A.8.d.(2) Large Print Test Book	Per Test
Year 1	\$75.00
Year 2	\$100.00
Year 3	\$100.00
Year 4	\$150.00
Year 5	\$150.00
A.8.e. Administrative Materials	
A.8.e.(1-2) Computer-based User's Guide	Per Guide
Year 1	\$1,971.93
Year 2	\$2,070.53
Year 3	\$2,174.05
Year 4	\$2,282.76
Year 5	\$2,396.89
A.8.e.(3) Test Administration Manual Development (include web optimized pdf version with test administrator/proctor scripts)	Per Manual
Year 1	\$1,800.00
Year 2	\$1,800.00
Year 3	\$1,800.00
Year 4	\$1,600.00
Year 5	\$1,600.00
A.8.e.(3) Test Administration Manual (TAM)	Per Manual (printed)
Year 1	\$1.30



Year 2	\$1.37
Year 3	\$1.44
Year 4	\$1.51
Year 5	\$1.58
A.8.e.(4) Test Administrator/Proctor Scripts (include web optimized pdf version)	Per Script (printed)
Year 1	\$1.16
Year 2	\$1.22
Year 3	\$1.28
Year 4	\$1.35
Year 5	\$1.42
A.8.e.(5-6) Teacher Header	All Assessments Per Header
Year 1	\$0.11
Year 2	\$0.14
Year 3	\$0.18
Year 4	\$1.23
Year 5	\$1.29
A.8.e.(7) Guide to Test Interpretation GTI	
A.8.e.(7) Comprehensive GTI (includes development and web optimized pdf version)	Per Assessment
Year 1	\$2,000.00
Year 2	\$1,800.00
Year 3	\$1,800.00
Year 4	\$1,600.00
Year 5	\$1,600.00
A.8.e.(7) Parent Brochure	Per Brochure
Year 1	\$0.20
Year 2	\$0.22
Year 3	\$0.22
Year 4	\$0.24
Year 5	\$0.24
A.8.f. Assessment Materials	
A.8.f.(1) Computer-Based Testing Platform - application, maintenance, customization, updates	Per Assessment / Per Admin
Year 1	\$0.00
Year 2	\$0.00
Year 3	\$0.00
Year 4	\$0.00



Year 5	\$0.00
A.8.f.(1) Computer-based Assessment	Per Student tested (per assessment per grade and/or content area)
Year 1	\$0.62
Year 2	\$0.57
Year 3	\$0.48
Year 4	\$0.50
Year 5	\$0.53
A.8.f.(2) Student Test Books	
A.8.f.(2) Two content areas (grade 3-8)	Per Test
Year 1	\$5.00
Year 2	\$8.00
Year 3	\$10.00
Year 4	\$12.00
Year 5	\$12.00
A.8.f.(2) One content area (HS)	Per Test
Year 1	\$4.67
Year 2	\$7.21
Year 3	\$10.00
Year 4	\$10.00
Year 5	\$12.00
A.8.f.(3) Student Response Documents	
A.8.f.(3) Multi-page	Per Document
Year 1	\$0.17
Year 2	\$0.26
Year 3	\$5.55
Year 4	\$5.83
Year 5	\$6.12
A.8.f.(3) One Sheet	Per Document
Year 1	\$0.17
Year 2	\$0.26
Year 3	\$5.55
Year 4	\$5.83
Year 5	\$6.12
A.9. Assessment Materials Packaging and Distribution	
A.9.b Packaging and Distribution	Per LEA/Per Assessment/Admin



Year 1	\$600.00
Year 2	\$500.00
Year 3	\$500.00
Year 4	\$500.00
Year 5	\$500.00
A.9.c. Inventory Management	
A.9.c Inventory Management Setup (includes website setup & customization, support documentation and training, equipment)	Per Assessment/Year
Year 1	\$17,440.35
Year 2	\$13,527.19
Year 3	\$9,179.12
Year 4	\$9,638.07
Year 5	\$10,119.98
A.9.c. Inventory Management Support & maintenance	Per Assessment/Admin
Year 1	\$0.00
Year 2	\$0.00
Year 3	\$0.00
Year 4	\$0.00
Year 5	\$0.00
A.10 & A.11. Technical and Functional Requirements	
A.11.a Custom programming	Per Hour
Year 1	\$169.82
Year 2	\$60.79
Year 3	\$63.83
Year 4	\$67.02
Year 5	\$28.15
A.8.c; A.8.f, A.11.c Website Hosting	Per Application/Month
Year 1	\$3,918.13
Year 2	\$4,021.16
Year 3	\$3,743.50
Year 4	\$3,930.68
Year 5	\$1,937.88
A.11.c. Enrollment and data provisioning	
A.11.c. Enrollment Setup (includes website setup & customization, support documentation and training)	Per Assessment/Year
Year 1	\$3,964.91
Year 2	\$2,542.11
Year 3	\$2,669.21



Year 4	\$2,802.67
Year 5	\$2,004.52
A.11.c. Enrollment Support & maintenance (includes data upload from state/systems)	Per Assessment/Admin
Year 1	\$868.42
Year 2	\$911.84
Year 3	\$957.43
Year 4	\$1,005.31
Year 5	\$211.11
A.11.c. Pre-Coding	
A.11.c. Pre-Coding Setup (includes website setup & customization, support documentation and training)	Per Assessment/Year
Year 1	\$3,964.91
Year 2	\$2,677.19
Year 3	\$2,811.05
Year 4	\$2,951.61
Year 5	\$2,473.66
A.11.c Pre-coding Support & maintenance (includes data uploads, pre-coding and reviews)	Per Assessment/Admin
Year 1	\$868.42
Year 2	\$911.84
Year 3	\$957.43
Year 4	\$1,005.31
Year 5	\$211.11
A.11.c. Pre-code response documents-multi- page	Per Document
Year 1	\$2.00
Year 2	\$3.00
Year 3	\$8.00
Year 4	\$10.00
Year 5	\$11.00
A.11.c. Pre-code response documents - single sheet	Per Document
Year 1	\$2.00
Year 2	\$3.00
Year 3	\$8.00
Year 4	\$10.00
Year 5	\$11.00
A.12. Processing Activities	
A.12. Assessment Processing (includes scanning, editing, SR scoring, and reporting)	Per Content Area/ Assessment/Admin



Year 1	\$25,000.00
Year 2	\$20,000.00
Year 3	\$20,000.00
Year 4	\$15,000.00
Year 5	\$15,000.00
A.13 Scoring Activities	
A.13.e(4) Range Finding	Per Meeting
Year 1	\$11,330.80
Year 2	\$11,897.34
Year 3	\$12,492.21
Year 4	\$13,116.82
Year 5	\$6,512.77
A.13.e (8) CRA Scoring w/ 2 hand scorers	Per Test
Year 1	\$11.75
Year 2	\$12.50
Year 3	\$12.50
Year 4	\$15.00
Year 5	\$15.00
A.14.e (7) CRA Scoring w/ 1 hand scorer & tech	Per Test
Year 1	\$0.00
Year 2	\$0.00
Year 3	\$0.00
Year 4	\$0.00
Year 5	\$0.00
A.14.e(7) CRA Scoring w/ tech scoring	Per test
Year 1	\$0.00
Year 2	\$0.00
Year 3	\$0.00
Year 4	\$0.00
Year 5	\$0.00
A.14.e.(7) Tech Model building	Per Test
Year 1	\$0.00
Year 2	\$0.00
Year 3	\$0.00
Year 4	\$0.00
Year 5	\$0.00
A.14.e (7) Tech Monitoring	Per Test



Year 1	\$0.00
Year 2	\$0.00
Year 3	\$0.00
Year 4	\$0.00
Year 5	\$0.00
A.14. Reporting Activities	
A.14.f. Online Reporting Setup (includes report customization)	Per Assessment/Admin
Year 1	\$9,938.60
Year 2	\$5,065.79
Year 3	\$5,319.08
Year 4	\$5,585.03
Year 5	\$351.86
A.14.f. Online Reporting Support and Maintenance (includes training and posting of all reports)	Per Assessment/Admin
Year 1	\$2,605.26
Year 2	\$2,735.53
Year 3	\$2,872.30
Year 4	\$3,015.92
Year 5	\$633.34
A.14.j Paper Reports / Labels	
A.14.j Student Reports grade 3-8	Per Student (4 content areas)
Year 1	\$0.53
Year 2	\$0.47
Year 3	\$0.50
Year 4	\$0.53
Year 5	\$0.47
A.14.j EOC Student Reports	Per Student (ea)
Year 1	\$0.37
Year 2	\$0.33
Year 3	\$0.36
Year 4	\$0.38
Year 5	\$0.38
A.14.j Student Labels grades 3-8	Per Student
Year 1	\$0.30
Year 2	\$0.31
Year 3	\$0.34
Year 4	\$0.36
Year 5	\$0.39
A.14.j EOC Student Labels	Per Student



Year 1	\$0.18
Year 2	\$0.19
Year 3	\$0.20
Year 4	\$0.22
Year 5	\$0.23
A.14.j Comprehensive Data Files (CDF)	1 - ACH, 1 EOC/YR, 1 EOC Fall, Spring - each includes SR & CR and 1 Alt
Year 1	\$8,336.84
Year 2	\$3,809.47
Year 3	\$3,999.95
Year 4	\$4,199.94
Year 5	\$2,439.54

*Notice: The amount(s) per compensable increment detailed above shall be contingent upon the State's receipt of an invoice (as required in section C.5. below) for said service(s) within thirty (30) days after the end of the calendar month in which the service(s) were rendered. At the sole discretion of the State, the amount per compensable increment of any service for which the State receives an invoice later than prescribed herein shall be subject to a reduction in amount of up to 100%. In the case of an untimely invoice, before any payment will be considered by the State, the Contractor must submit a written request regarding the untimely invoice, which shall detail the reason the invoice is untimely as well as the Contractor's plan for submitting all future invoices no later than prescribed herein, and it must be signed by an individual empowered to bind the Contractor to this Contract.

C.4. Travel Compensation. The Contractor shall not be compensated or reimbursed for travel time, travel expenses, meals, or lodging.

C.5. Invoice Requirements. The Contractor shall invoice the State only for goods delivered and accepted by the State or services satisfactorily provided at the amounts stipulated in Section C.3., above. Contractor shall submit invoices and necessary supporting documentation, no more frequently than once a month, and no later than thirty (30) days after goods or services have been provided to the following address:

Tennessee Department of Education
 Division of Data and Research
 Andrew Johnson Tower – 10th Floor
 710 James Robertson Parkway
 Nashville, TN 37243
 615.741.0720

- a. Each invoice, on Contractor's letterhead, shall clearly and accurately detail all of the following information (calculations must be extended and totaled correctly):
 - (1) Invoice number (assigned by the Contractor);
 - (2) Invoice date;
 - (3) Contract number (assigned by the State);
 - (4) Customer account name: Department of Education, Division of Data and Research;
 - (5) Customer account number (assigned by the Contractor to the above-referenced Customer);
 - (6) Contractor name;
 - (7) Contractor Tennessee Edison registration ID number;



- (8) Contractor contact for invoice questions (name, phone, or email);
- (9) Contractor remittance address;
- (10) Description of delivered goods or services provided and invoiced, including identifying information as applicable;
- (11) Number of delivered or completed units, increments, hours, or days as applicable, of each good or service invoiced;
- (12) Applicable payment methodology (as stipulated in Section C.3.) of each good or service invoiced;
- (13) Amount due for each compensable unit of good or service; and
- (14) Total amount due for the invoice period.

b. Contractor's invoices shall:

- (1) Only include charges for goods delivered or services provided as described in Section A and in accordance with payment terms and conditions set forth in Section C;
- (2) Only be submitted for goods delivered or services completed and shall not include any charge for future goods to be delivered or services to be performed;
- (3) Not include Contractor's taxes, which includes without limitation Contractor's sales and use tax, excise taxes, franchise taxes, real or personal property taxes, or income taxes; and
- (4) Include shipping or delivery charges only as authorized in this Contract.

c. The timeframe for payment (or any discounts) begins only when the State is in receipt of an invoice that meets the minimum requirements of this Section C.5.

C.6. Payment of Invoice. A payment by the State shall not prejudice the State's right to object to or question any payment, invoice, or other matter. A payment by the State shall not be construed as acceptance of goods delivered, any part of the services provided, or as approval of any amount invoiced.

C.7. Invoice Reductions. The Contractor's invoice shall be subject to reduction for amounts included in any invoice or payment that is determined by the State, on the basis of audits conducted in accordance with the terms of this Contract, to not constitute proper compensation for goods delivered or services provided.

C.8. Deductions. The State reserves the right to deduct from amounts, which are or shall become due and payable to the Contractor under this or any contract between the Contractor and the State of Tennessee, any amounts that are or shall become due and payable to the State of Tennessee by the Contractor.

C.9. Prerequisite Documentation. The Contractor shall not invoice the State under this Contract until the State has received the following, properly completed documentation.

- a. The Contractor shall complete, sign, and present to the State the "Authorization Agreement for Automatic Deposit Form" provided by the State. By doing so, the Contractor acknowledges and agrees that, once this form is received by the State, payments to the Contractor, under this or any other contract the Contractor has with the State of Tennessee, may be made by ACH; and
- b. The Contractor shall complete, sign, and return to the State the State-provided W-9 form. The taxpayer identification number on the W-9 form must be the same as the Contractor's Federal Employer Identification Number or Social Security Number referenced in the Contractor's Edison registration information.

D. MANDATORY TERMS AND CONDITIONS:

D.1. Required Approvals. The State is not bound by this Contract until it is duly approved by the Parties and all appropriate State officials in accordance with applicable Tennessee laws and



regulations. Depending upon the specifics of this Contract, this may include approvals by the Commissioner of Finance and Administration, the Commissioner of Human Resources, the Comptroller of the Treasury, and the Chief Procurement Officer. Approvals shall be evidenced by a signature or electronic approval.

- D.2. Communications and Contacts. All instructions, notices, consents, demands, or other communications required or contemplated by this Contract shall be in writing and shall be made by certified, first class mail, return receipt requested and postage prepaid, by overnight courier service with an asset tracking system, or by email or facsimile transmission with recipient confirmation. All communications, regardless of method of transmission, shall be addressed to the respective Party at the appropriate mailing address, facsimile number, or email address as stated below or any other address provided in writing by a Party.

The State:

Dr. Nakia T. Towns, Assistant Commissioner
 Department of Education, Division of Data and Research
 Andrew Johnson Tower, 10th Floor
 710 James Robertson Parkway
 Nashville, TN 37243
 nakia.towns@tn.gov
 Telephone # (615) 487-2459
 FAX # (615) 532-7510

The Contractor:

Michael Woods, Vice President, State Solutions
 Questar Assessment, Inc.
 5550 Upper 147th Street West
 Apple Valley, MN 55124
 mwoods@questarai.com
 Office # (952) 997-0263
 Mobile # (845) 519-5470

All instructions, notices, consents, demands, or other communications shall be considered effective upon receipt or recipient confirmation as may be required.

- D.3. Modification and Amendment. This Contract may be modified only by a written amendment signed by all Parties and approved by all applicable State officials.
- D.4. Subject to Funds Availability. The Contract is subject to the appropriation and availability of State or federal funds. In the event that the funds are not appropriated or are otherwise unavailable, the State reserves the right to terminate this Contract upon written notice to the Contractor. The State's exercise of its right to terminate this Contract shall not constitute a breach of Contract by the State. Upon receipt of the written notice, the Contractor shall cease all work associated with the Contract. If the State terminates this Contract due to lack of funds availability, the Contractor shall be entitled to compensation for all conforming goods requested and accepted by the State and for all satisfactory and authorized services completed as of the termination date. Should the State exercise its right to terminate this Contract due to unavailability of funds, the Contractor shall have no right to recover from the State any actual, general, special, incidental, consequential, or any other damages of any description or amount.
- D.5. Termination for Convenience. The State may terminate this Contract for convenience without cause and for any reason. The State shall give the Contractor at least thirty (30) days written notice before the termination date. The Contractor shall be entitled to compensation for all conforming goods delivered and accepted by the State or for satisfactory, authorized services completed as of the termination date. In no event shall the State be liable to the Contractor for compensation for any goods neither requested nor accepted by the State or for any services neither requested by the State nor satisfactorily performed by the Contractor. In no event shall



the State's exercise of its right to terminate this Contract for convenience relieve the Contractor of any liability to the State for any damages or claims arising under this Contract.

- D.6. Termination for Cause. If the Contractor fails to properly perform its obligations under this Contract in a timely or proper manner, or if the Contractor materially violates any terms of this Contract ("Breach Condition"), the State shall have the right to immediately terminate the Contract and withhold payments in excess of compensation for completed services or provided goods. Notwithstanding the above, the Contractor shall not be relieved of liability to the State for damages sustained by virtue of any Breach Condition and the State may seek other remedies allowed at law or in equity for breach of this Contract.
- D.7. Assignment and Subcontracting. The Contractor shall not assign this Contract or enter into a subcontract for any of the goods or services provided under this Contract without the prior written approval of the State. Notwithstanding any use of the approved subcontractors, the Contractor shall be the prime contractor and responsible for compliance with all terms and conditions of this Contract. The State reserves the right to request additional information or impose additional terms and conditions before approving an assignment of this Contract in whole or in part or the use of subcontractors in fulfilling the Contractor's obligations under this Contract.
- D.8. Conflicts of Interest. The Contractor warrants that no part of the Contractor's compensation shall be paid directly or indirectly to an employee or official of the State of Tennessee as wages, compensation, or gifts in exchange for acting as an officer, agent, employee, subcontractor, or consultant to the Contractor in connection with any work contemplated or performed under this Contract.

The Contractor acknowledges, understands, and agrees that this Contract shall be null and void if the Contractor is, or within the past six (6) months has been, an employee of the State of Tennessee or if the Contractor is an entity in which a controlling interest is held by an individual who is, or within the past six (6) months has been, an employee of the State of Tennessee.

- D.9. Nondiscrimination. The Contractor hereby agrees, warrants, and assures that no person shall be excluded from participation in, be denied benefits of, or be otherwise subjected to discrimination in the performance of this Contract or in the employment practices of the Contractor on the grounds of handicap or disability, age, race, creed, color, religion, sex, national origin, or any other classification protected by federal or state law. The Contractor shall, upon request, show proof of nondiscrimination and shall post in conspicuous places, available to all employees and applicants, notices of nondiscrimination.
- D.10. Prohibition of Illegal Immigrants. The requirements of Tenn. Code Ann. § 12-3-309 addressing the use of illegal immigrants in the performance of any contract to supply goods or services to the state of Tennessee, shall be a material provision of this Contract, a breach of which shall be grounds for monetary and other penalties, up to and including termination of this Contract.
- a. The Contractor agrees that the Contractor shall not knowingly utilize the services of an illegal immigrant in the performance of this Contract and shall not knowingly utilize the services of any subcontractor who will utilize the services of an illegal immigrant in the performance of this Contract. The Contractor shall reaffirm this attestation, in writing, by submitting to the State a completed and signed copy of the document at Attachment A, semi-annually during the Term. If the Contractor is a party to more than one contract with the State, the Contractor may submit one attestation that applies to all contracts with the State. All Contractor attestations shall be maintained by the Contractor and made available to State officials upon request.
 - b. Prior to the use of any subcontractor in the performance of this Contract, and semi-annually thereafter, during the Term, the Contractor shall obtain and retain a current, written attestation that the subcontractor shall not knowingly utilize the services of an illegal immigrant to perform work under this Contract and shall not knowingly utilize the services of any subcontractor who will utilize the services of an illegal immigrant to



perform work under this Contract. Attestations obtained from subcontractors shall be maintained by the Contractor and made available to State officials upon request.

- c. The Contractor shall maintain records for all personnel used in the performance of this Contract. Contractor's records shall be subject to review and random inspection at any reasonable time upon reasonable notice by the State.
 - d. The Contractor understands and agrees that failure to comply with this section will be subject to the sanctions of Tenn. Code Ann. § 12-3-309 for acts or omissions occurring after its effective date.
 - e. For purposes of this Contract, "illegal immigrant" shall be defined as any person who is not: (i) a United States citizen; (ii) a Lawful Permanent Resident; (iii) a person whose physical presence in the United States is authorized; (iv) allowed by the federal Department of Homeland Security and who, under federal immigration laws or regulations, is authorized to be employed in the U.S.; or (v) is otherwise authorized to provide services under the Contract.
- D.11. Records. The Contractor shall maintain documentation for all charges under this Contract. The books, records, and documents of the Contractor, for work performed or money received under this Contract, shall be maintained for a period of five (5) full years from the date of the final payment and shall be subject to audit at any reasonable time and upon reasonable notice by the State, the Comptroller of the Treasury, or their duly appointed representatives. The financial statements shall be prepared in accordance with generally accepted accounting principles.
- D.12. Monitoring. The Contractor's activities conducted and records maintained pursuant to this Contract shall be subject to monitoring and evaluation by the State, the Comptroller of the Treasury, or their duly appointed representatives.
- D.13. Progress Reports. The Contractor shall submit brief, periodic, progress reports to the State as requested.
- D.14. Strict Performance. Failure by any Party to this Contract to require, in any one or more cases, the strict performance of any of the terms, covenants, conditions, or provisions of this Contract shall not be construed as a waiver or relinquishment of any term, covenant, condition, or provision. No term or condition of this Contract shall be held to be waived, modified, or deleted except by a written amendment signed by the Parties.
- D.15. Independent Contractor. The Parties shall not act as employees, partners, joint venturers, or associates of one another. The Parties are independent contracting entities. Nothing in this Contract shall be construed to create an employer/employee relationship or to allow either Party to exercise control or direction over the manner or method by which the other transacts its business affairs or provides its usual services. The employees or agents of one Party are not employees or agents of the other Party.
- D.16. Patient Protection and Affordable Care Act. The Contractor agrees that it will be responsible for compliance with the Patient Protection and Affordable Care Act ("PPACA") with respect to itself and its employees, including any obligation to report health insurance coverage, provide health insurance coverage, or pay any financial assessment, tax, or penalty for not providing health insurance. The Contractor shall indemnify the State and hold it harmless for any costs to the State arising from Contractor's failure to fulfill its PPACA responsibilities for itself or its employees.
- D.17. Limitation of State's Liability. The State shall have no liability except as specifically provided in this Contract. In no event will the State be liable to the Contractor or any other party for any lost revenues, lost profits, loss of business, decrease in the value of any securities or cash position, time, money, goodwill, or any indirect, special, incidental, punitive, exemplary or consequential damages of any nature, whether based on warranty, contract, statute, regulation,



tort (including but not limited to negligence), or any other legal theory that may arise under this Contract or otherwise. The State's total liability under this Contract (including any exhibits, schedules, amendments or other attachments to the Contract) or otherwise shall under no circumstances exceed the Maximum Liability. This limitation of liability is cumulative and not per incident.

- D.18. Limitation of Contractor's Liability. In accordance with Tenn. Code Ann. § 12-3-701, the Contractor's liability for all claims arising under this Contract shall be limited to an amount equal to two (2) times the Maximum Liability amount detailed in Section C.1. and as may be amended, PROVIDED THAT in no event shall this Section limit the liability of the Contractor for: (i) intellectual property or any Contractor indemnity obligations for infringement for third-party intellectual property rights; (ii) any claims covered by any specific provision in the Contract providing for liquidated damages; or (iii) any claims for intentional torts, criminal acts, fraudulent conduct, or acts or omissions that result in personal injuries or death.
- D.19. Hold Harmless. The Contractor agrees to indemnify and hold harmless the State of Tennessee as well as its officers, agents, and employees from and against any and all claims, liabilities, losses, and causes of action which may arise, accrue, or result to any person, firm, corporation, or other entity which may be injured or damaged as a result of acts, omissions, or negligence on the part of the Contractor, its employees, or any person acting for or on its or their behalf relating to this Contract. The Contractor further agrees it shall be liable for the reasonable cost of attorneys for the State to enforce the terms of this Contract.

In the event of any suit or claim, the Parties shall give each other immediate notice and provide all necessary assistance to respond. The failure of the State to give notice shall only relieve the Contractor of its obligations under this Section to the extent that the Contractor can demonstrate actual prejudice arising from the failure to give notice. This Section shall not grant the Contractor, through its attorneys, the right to represent the State in any legal matter, as the right to represent the State is governed by Tenn. Code Ann. § 8-6-106.

- D.20. HIPAA Compliance. The State and Contractor shall comply with obligations under the Health Insurance Portability and Accountability Act of 1996 ("HIPAA"), Health Information Technology for Economic and Clinical Health ("HITECH") Act and any other relevant laws and regulations regarding privacy (collectively the "Privacy Rules"). The obligations set forth in this Section shall survive the termination of this Contract.
- a. Contractor warrants to the State that it is familiar with the requirements of the Privacy Rules, and will comply with all applicable requirements in the course of this Contract.
 - b. Contractor warrants that it will cooperate with the State, including cooperation and coordination with State privacy officials and other compliance officers required by the Privacy Rules, in the course of performance of the Contract so that both parties will be in compliance with the Privacy Rules.
 - c. The State and the Contractor will sign documents, including but not limited to business associate agreements, as required by the Privacy Rules and that are reasonably necessary to keep the State and Contractor in compliance with the Privacy Rules. This provision shall not apply if information received or delivered by the parties under this Contract is NOT "protected health information" as defined by the Privacy Rules, or if the Privacy Rules permit the parties to receive or deliver the information without entering into a business associate agreement or signing another document.
 - d. The Contractor will indemnify the State and hold it harmless for any violation by the Contractor or its subcontractors of the Privacy Rules. This includes the costs of responding to a breach of protected health information, the costs of responding to a government enforcement action related to the breach, and any fines, penalties, or damages paid by the State because of the violation.



- D.21. Tennessee Consolidated Retirement System. Subject to statutory exceptions contained in Tenn. Code Ann. §§ 8-36-801, *et seq.*, the law governing the Tennessee Consolidated Retirement System (“TCRS”), provides that if a retired member of TCRS, or of any superseded system administered by TCRS, or of any local retirement fund established under Tenn. Code Ann. §§ 8-35-101, *et seq.*, accepts State employment, the member’s retirement allowance is suspended during the period of the employment. Accordingly and notwithstanding any provision of this Contract to the contrary, the Contractor agrees that if it is later determined that the true nature of the working relationship between the Contractor and the State under this Contract is that of “employee/employer” and not that of an independent contractor, the Contractor, if a retired member of TCRS, may be required to repay to TCRS the amount of retirement benefits the Contractor received from TCRS during the Term.
- D.22. Tennessee Department of Revenue Registration. The Contractor shall comply with all applicable registration requirements contained in Tenn. Code Ann. §§ 67-6-601 – 608. Compliance with applicable registration requirements is a material requirement of this Contract.
- D.23. Debarment and Suspension. The Contractor certifies, to the best of its knowledge and belief, that it, its current and future principals, its current and future subcontractors and their principals:
- a. are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any federal or state department or agency;
 - b. have not within a three (3) year period preceding this Contract been convicted of, or had a civil judgment rendered against them from commission of fraud, or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (federal, state, or local) transaction or grant under a public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification, or destruction of records, making false statements, or receiving stolen property;
 - c. are not presently indicted or otherwise criminally or civilly charged by a government entity (federal, state, or local) with commission of any of the offenses detailed in section b. of this certification; and
 - d. have not within a three (3) year period preceding this Contract had one or more public transactions (federal, state, or local) terminated for cause or default.

The Contractor shall provide immediate written notice to the State if at any time it learns that there was an earlier failure to disclose information or that due to changed circumstances, its principals or the principals of its subcontractors are excluded or disqualified.

- D.24. Force Majeure. “Force Majeure Event” means fire, flood, earthquake, elements of nature or acts of God, wars, riots, civil disorders, rebellions or revolutions, acts of terrorism or any other similar cause beyond the reasonable control of the Party except to the extent that the non-performing Party is at fault in failing to prevent or causing the default or delay, and provided that the default or delay cannot reasonably be circumvented by the non-performing Party through the use of alternate sources, workaround plans or other means. A strike, lockout or labor dispute shall not excuse either Party from its obligations under this Contract. Except as set forth in this Section, any failure or delay by a Party in the performance of its obligations under this Contract arising from a Force Majeure Event is not a default under this Contract or grounds for termination. The non-performing Party will be excused from performing those obligations directly affected by the Force Majeure Event, and only for as long as the Force Majeure Event continues, provided that the Party continues to use diligent, good faith efforts to resume performance without delay. The occurrence of a Force Majeure Event affecting Contractor’s representatives, suppliers, subcontractors, customers or business apart from this Contract is not a Force Majeure Event under this Contract. Contractor will promptly notify the State of any delay caused by a Force Majeure Event (to be confirmed in a written notice to the State within one (1) day of the inception of the delay) that a Force Majeure Event has occurred,



and will describe in reasonable detail the nature of the Force Majeure Event. If any Force Majeure Event results in a delay in Contractor's performance longer than forty-eight (48) hours, the State may, upon notice to Contractor: (a) cease payment of the fees until Contractor resumes performance of the affected obligations; or (b) immediately terminate this Contract or any purchase order, in whole or in part, without further payment except for fees then due and payable. Contractor will not increase its charges under this Contract or charge the State any fees other than those provided for in this Contract as the result of a Force Majeure Event.

- D.25. State and Federal Compliance. The Contractor shall comply with all applicable state and federal laws and regulations in the performance of this Contract.
- D.26. Governing Law. This Contract shall be governed by and construed in accordance with the laws of the State of Tennessee. The Tennessee Claims Commission or the state or federal courts in Tennessee shall be the venue for all claims, disputes, or disagreements arising under this Contract. The Contractor acknowledges and agrees that any rights, claims, or remedies against the State of Tennessee or its employees arising under this Contract shall be subject to and limited to those rights and remedies available under Tenn. Code Ann. §§ 9-8-101 - 407.
- D.27. Entire Agreement. This Contract is complete and contains the entire understanding between the Parties relating to its subject matter, including all the terms and conditions of the Parties' agreement. This Contract supersedes any and all prior understandings, representations, negotiations, and agreements between the Parties, whether written or oral.
- D.28. Severability. If any terms and conditions of this Contract are held to be invalid or unenforceable as a matter of law, the other terms and conditions of this Contract shall not be affected and shall remain in full force and effect. The terms and conditions of this Contract are severable.
- D.29. Headings. Section headings of this Contract are for reference purposes only and shall not be construed as part of this Contract.
- D.30. Incorporation of Additional Documents. Each of the following documents is included as a part of this Contract by reference. In the event of a discrepancy or ambiguity regarding the Contractor's duties, responsibilities, and performance under this Contract, these items shall govern in order of precedence below:
- a. any amendment to this Contract, with the latter in time controlling over any earlier amendments;
 - b. this Contract with any attachments or exhibits (excluding the items listed at subsections c. through f., below), which includes Attachment A: Attestation and Attachment B: Liquidated Damages;
 - c. any clarifications of or addenda to the Contractor's proposal seeking this Contract;
 - d. the State solicitation, as may be amended, requesting responses in competition for this Contract;
 - e. any technical specifications provided to proposers during the procurement process to award this Contract; and
 - f. the Contractor's response seeking this Contract.
- D.31. Insurance. Contractor shall provide the State a certificate of insurance ("COI") evidencing the coverages and amounts specified below. The COI shall be provided ten (10) business days prior to the Effective Date and again upon renewal or replacement of coverages required by this Contract. If insurance expires during the Term, the State must receive a new COI at least thirty (30) calendar days prior to the insurance's expiration date. If the Contractor loses insurance coverage, does not renew coverage, or for any reason becomes uninsured during the Term, the Contractor shall notify the State immediately.

The COI shall be on a form approved by the Tennessee Department of Commerce and Insurance ("TDCI") and signed by an authorized representative of the insurer. The COI shall list each insurer's national association of insurance commissioners (also known as NAIC) number or federal employer identification number and list the State of Tennessee, Risk Manager, 312



Rosa L. Parks Ave., 3rd floor Central Procurement Office, Nashville, TN 37243 in the certificate holder section. At any time, the State may require the Contractor to provide a valid COI detailing coverage description; insurance company; policy number; exceptions; exclusions; policy effective date; policy expiration date; limits of liability; and the name and address of insured. The Contractor's failure to maintain or submit evidence of insurance coverage is considered a material breach of this Contract.

If the Contractor desires to self-insure, then a COI will not be required to prove coverage. In place of the COI, the Contractor must provide a certificate of self-insurance or a letter on the Contractor's letterhead detailing its coverage, liability policy amounts, and proof of funds to reasonably cover such expenses. Compliance with Tenn. Code Ann. § 50-6-405 and the rules of the TDCI is required for the Contractor to self-insure workers' compensation.

All insurance companies must be: (a) acceptable to the State; (b) authorized by the TDCI to transact business in the State of Tennessee; and (c) rated A- VII or better by A. M. Best. The Contractor shall provide the State evidence that all subcontractors maintain the required insurance or that the subcontractors are included under the Contractor's policy.

The Contractor agrees to name the State as an additional insured on any insurance policies with the exception of workers' compensation (employer liability) and professional liability (errors and omissions) ("Professional Liability") insurance. Also, all policies shall contain an endorsement for a waiver of subrogation in favor of the State.

The deductible and any premiums are the Contractor's sole responsibility. Any deductible over fifty thousand dollars (\$50,000) must be approved by the State. The Contractor agrees that the insurance requirements specified in this Section do not reduce any liability the Contractor has assumed under this Contract including any indemnification or hold harmless requirements. The State agrees that it shall give written notice to the Contractor as soon as practicable after the State becomes aware of any claim asserted or made against the State, but in no event later than thirty (30) calendar days after the State becomes aware of such claim. The failure of the State to give notice shall only relieve the Contractor of its obligations under this Section to the extent that the Contractor can demonstrate actual prejudice arising from the failure to give notice. This Section shall not grant the Contractor or its insurer, through its attorneys, the right to represent the State in any legal matter, as the right to represent the State is governed by Tenn. Code Ann. § 8-6-106.

All coverage required shall be on a primary basis and noncontributory with any other insurance coverage or self-insurance carried by the State. The State reserves the right to amend or require additional endorsements, types of coverage, and higher or lower limits of coverage depending on the nature of the work. Purchases or contracts involving any hazardous activity or equipment, tenant, concessionaire and lease agreements, alcohol sales, cyber-liability risks, environmental risks, special motorized equipment, or property may require customized insurance requirements (e.g. umbrella liability insurance) in addition to the general requirements listed below.

- a. Commercial General Liability Insurance
 - 1) The Contractor shall maintain commercial general liability insurance, which shall be written on an Insurance Services Office, Inc. (also known as ISO) occurrence form (or a substitute form providing equivalent coverage) and shall cover liability arising from property damage, premises/operations, independent contractors, contractual liability, completed operations/products, personal and advertising injury, and liability assumed under an insured contract (including the tort liability of another assumed in a business contract).
 - 2) The Contractor shall maintain bodily injury/property damage with a combined single limit not less than one million dollars (\$1,000,000) per occurrence and two million dollars (\$2,000,000) aggregate for bodily injury and property damage, including products and completed operations coverage with an aggregate limit of at least two million dollars (\$2,000,000).
- b. Workers' Compensation and Employer Liability Insurance



- 1) For Contractors statutorily required to carry workers' compensation and employer liability insurance, the Contractor shall maintain:
 - i. Workers' compensation in an amount not less than one million dollars (\$1,000,000) including employer liability of one million dollars (\$1,000,000) per accident for bodily injury by accident, one million dollars (\$1,000,000) policy limit by disease, and one million dollars (\$1,000,000) per employee for bodily injury by disease.
- 2) If the Contractor certifies that it is exempt from the requirements of Tenn. Code Ann. §§ 50-6-101 – 103, then the Contractor shall furnish written proof of such exemption for one or more of the following reasons:
 - i. The Contractor employs fewer than five (5) employees;
 - ii. The Contractor is a sole proprietor;
 - iii. The Contractor is in the construction business or trades with no employees;
 - iv. The Contractor is in the coal mining industry with no employees;
 - v. The Contractor is a state or local government; or
 - vi. The Contractor self-insures its workers' compensation and is in compliance with the TDCI rules and Tenn. Code Ann. § 50-6-405.

c. Professional Liability Insurance

- 3) Professional liability insurance shall be written on an occurrence basis. This coverage may be written on a claims-made basis but must include an extended reporting period or "tail coverage" of at least two (2) years after the Term;
- 4) Any professional liability insurance policy shall have a limit not less than one million dollars (\$1,000,000) per claim and two million dollars (\$2,000,000) in the aggregate; and
- 5) If the Contract involves the provision of services by medical professionals, a policy limit not less than two million (\$2,000,000) per claim and three million dollars (\$3,000,000) in the aggregate for medical malpractice insurance.

E. SPECIAL TERMS AND CONDITIONS:

- E.1. Conflicting Terms and Conditions. Should any of these special terms and conditions conflict with any other terms and conditions of this Contract, the special terms and conditions shall be subordinate to the Contract's other terms and conditions.
- E.2. Confidentiality of Records. Strict standards of confidentiality of records and information shall be maintained in accordance with applicable state and federal law. All material and information, regardless of form, medium or method of communication, provided to the Contractor by the State or acquired by the Contractor on behalf of the State that is regarded as confidential under state or federal law shall be regarded as "Confidential Information." Nothing in this Section shall permit Contractor to disclose any Confidential Information, regardless of whether it has been disclosed or made available to the Contractor due to intentional or negligent actions or inactions of agents of the State or third parties. Confidential Information shall not be disclosed except as required or permitted under state or federal law. Contractor shall take all necessary steps to safeguard the confidentiality of such material or information in conformance with applicable state and federal law.

The obligations set forth in this Section shall survive the termination of this Contract.

- E.3. Printing Authorization. The Contractor agrees that no publication coming within the jurisdiction of Tenn. Code Ann. §§ 12-7-101, *et. seq.*, shall be printed pursuant to this Contract unless a printing authorization number has been obtained and affixed as required by Tenn. Code Ann. § 12-7-103 (d).



- E.4. State Ownership of Goods. The State shall have ownership, right, title, and interest in all goods provided by Contractor under this Contract including full rights to use the goods and transfer title in the goods to any third parties. The Contractor's proprietary systems utilized for this contract will continue to be owned by the Contractor.
- E.5. Additional lines, items, or options. At its sole discretion, the State may make written requests to the Contractor to add lines, items, or options that are needed and within the Scope but were not included in the original Contract. Such lines, items, or options will be added to the Contract through a Memorandum of Understanding ("MOU"), not an amendment.
- a. After the Contractor receives a written request to add lines, items, or options, the Contractor shall have ten (10) business days to respond with a written proposal. The Contractor's written proposal shall include:
 - (1) The effect, if any, of adding the lines, items, or options on the other goods or services required under the Contract;
 - (2) Any pricing related to the new lines, items, or options;
 - (3) The expected effective date for the availability of the new lines, items, or options; and
 - (4) Any additional information requested by the State.
 - b. The State may negotiate the terms of the Contractor's proposal by requesting revisions to the proposal.
 - c. To indicate acceptance of a proposal, the State will sign it. The signed proposal shall constitute a MOU between the Parties, and the lines, items, or options shall be incorporated into the Contract as if set forth verbatim.
 - d. Only after a MOU has been executed shall the Contractor perform or deliver the new lines, items, or options.
- E.6. Ownership of Software and Work Products.
- a. Definitions.
 - (1) "Contractor-Owned Software," shall mean commercially available software the rights to which are owned by Contractor, including but not limited to commercial "off-the-shelf" software which is not developed using State's money or resources.
 - (2) "Custom-Developed Application Software," shall mean customized application software developed by Contractor solely for State.
 - (3) "Rights Transfer Application Software," shall mean any pre-existing application software owned by Contractor or a third party, provided to State and to which Contractor will grant and assign, or will facilitate the granting and assignment of, all rights, including the source code, to State.
 - (4) "Third-Party Software," shall mean software not owned by the State or the Contractor.
 - (5) "Work Product," shall mean all deliverables exclusive of hardware, such as software, software source code, documentation, planning, etc., that are created, designed, developed, or documented by the Contractor exclusively for the State during the course of the project using State's money or resources, including Custom-Developed Application Software. If the deliverables under this Contract include Rights Transfer Application Software, the definition of Work Product shall also include such software. Work Product shall not include Contractor-Owned Software or Third-Party Software.
 - b. Rights and Title to the Software
 - (1) All right, title and interest in and to the Contractor-Owned Software shall at all times remain with Contractor, subject to any license granted under this Contract.



- (2) All right, title and interest in and to the Work Product, and to modifications thereof made by State, including without limitation all copyrights, patents, trade secrets and other intellectual property and other proprietary rights embodied by and arising out of the Work Product, shall belong to State. To the extent such rights do not automatically belong to State, Contractor hereby assigns, transfers, and conveys all right, title and interest in and to the Work Product, including without limitation the copyrights, patents, trade secrets, and other intellectual property rights arising out of or embodied by the Work Product. Contractor and its employees, agents, contractors or representatives shall execute any other documents that State or its counsel deem necessary or desirable to document this transfer or allow State to register its claims and rights to such intellectual property rights or enforce them against third parties.
- (3) All right, title and interest in and to the Third-Party Software shall at all times remain with the third party, subject to any license granted under this Contract.
- c. The Contractor may use for its own purposes the general knowledge, skills, experience, ideas, concepts, know-how, and techniques obtained and used during the course of performing under this Contract. The Contractor may develop for itself, or for others, materials which are similar to or competitive with those that are produced under this Contract.
- E.7. Federal Educational Rights and Privacy Act & Tennessee Data Accessibility, Transparency and Accountability Act. The Contractor shall comply with the Federal Educational Rights and Privacy Act of 1974 (20 U.S.C. 1232(g)) and its accompanying regulations (34 C.F.R. § 99) ("FERPA"). The Contractor warrants that the Contractor is familiar with FERPA requirements and that it will comply with these requirements in the performance of its duties under this Contract. The Contractor agrees to cooperate with the State, as required by FERPA, in the performance of its duties under this Contract. The Contractor agrees to maintain the confidentiality of all education records and student information. The Contractor shall only use such records and information for the exclusive purpose of performing its duties under this Contract.
- The Contractor shall also comply with Tenn. Code Ann. § 49-1-701, *et seq.*, known as the "Data Accessibility, Transparency and Accountability Act," and any accompanying administrative rules or regulations (collectively "DATAA"). The Contractor agrees to maintain the confidentiality of all records containing student and de-identified data, as this term is defined in DATAA, in any databases, to which the State has granted the Contractor access, and to only use such data for the exclusive purpose of performing its duties under this Contract.
- Any instances of unauthorized disclosure of data containing personally identifiable information in violation of FERPA or DATAA that come to the attention of the Contractor shall be reported to the State within twenty-four (24) hours. Contractor shall indemnify and hold harmless State, its employees, agents and representatives, from and against any and all claims, liabilities, losses, or causes of action that may arise, accrue, or result to any person or entity that is injured or damaged as a result of Contractor's failure to comply with this section.
- E.8. Work Papers Subject to Review. The Contractor shall make all audit, accounting, or financial analysis work papers, notes, and other documentation available for review by the Comptroller of the Treasury or his representatives, upon request, during normal working hours either while the analysis is in progress or subsequent to the completion of this Contract.
- E.9. Prohibited Advertising or Marketing. The Contractor shall not suggest or imply in advertising or marketing materials that Contractor's goods or services are endorsed by the State. The restrictions on Contractor advertising or marketing materials under this Section shall survive the termination of this Contract.
- E.10. Public Accountability. If the Contractor is subject to Tenn. Code Ann. §§ 8-4-401, *et seq.*, or if this Contract involves the provision of services to citizens by the Contractor on behalf of the



State, the Contractor agrees to establish a system through which recipients of services may present grievances about Contractor's operation of the service program. The Contractor shall also display in a prominent place, located near the passageway through which the public enters in order to receive contract-supported services, a sign at least eleven inches (11") in height and seventeen inches (17") in width stating the following:

NOTICE: THIS AGENCY IS A RECIPIENT OF TAXPAYER FUNDING. IF YOU OBSERVE AN AGENCY DIRECTOR OR EMPLOYEE ENGAGING IN ANY ACTIVITY THAT YOU CONSIDER TO BE ILLEGAL, IMPROPER, OR WASTEFUL, PLEASE CALL THE STATE COMPTROLLER'S TOLL-FREE HOTLINE: 1-800-232-5454

The sign shall be of the form prescribed by the Comptroller of the Treasury. The contracting state agency shall request copies of the sign from the Comptroller of the Treasury and provide signs to contractors.

- E.11. Environmental Tobacco Smoke. Pursuant to the provisions of the federal "Pro-Children Act of 1994" and the Tennessee "Children's Act for Clean Indoor Air of 1995," the Contractor shall prohibit smoking of tobacco products within any indoor premises in which services are provided pursuant to this Contract to individuals under the age of eighteen (18) years. The Contractor shall post "no smoking" signs in appropriate, permanent sites within such premises. This prohibition shall be applicable during all hours, not just the hours in which children are present. Violators of the prohibition may be subject to civil penalties and fines. This prohibition shall apply to and be made part of any subcontract related to this Contract.
- E.12. Intellectual Property. The Contractor agrees to indemnify and hold harmless the State of Tennessee as well as its officers, agents, and employees from and against any and all claims or suits which may be brought against the State concerning or arising out of any claim of an alleged patent, copyright, trade secret or other intellectual property infringement. In any such claim or action brought against the State, the Contractor shall satisfy and indemnify the State for the amount of any settlement or final judgment, and the Contractor shall be responsible for all legal or other fees or expenses incurred by the State arising from any such claim. The State shall give the Contractor notice of any such claim or suit, however, the failure of the State to give such notice shall only relieve Contractor of its obligations under this Section to the extent Contractor can demonstrate actual prejudice arising from the State's failure to give notice. This Section shall not grant the Contractor, through its attorneys, the right to represent the State of Tennessee in any legal matter, as provided in Tenn. Code Ann. § 8-6-106.
- E.13. Liquidated Damages. If a failure to meet deadlines as established in the Annual Work Plan, inaccurate calculations resulting from errors on the part of the Contractor, or failure or partial performance of any term or provision of the Contract occurs, ("Liquidated Damages Event"), the State may assess damages on Contractor ("Liquidated Damages"). The State shall notify the Contractor of amounts to be assessed as Liquidated Damages. The Parties agree that due to the complicated nature of the Contractor's obligations under this Contract it would be difficult to specifically designate a monetary amount for Contractor's failure to fulfill its obligations regarding the Liquidated Damages Event as these amounts are likely to be uncertain and not easily proven. Contractor has carefully reviewed the Liquidated Damages contained in Attachment B and agrees that these amounts represent a reasonable relationship between the amount and what might reasonably be expected in the event of a Liquidated Damages Event, and are a reasonable estimate of the damages that would occur from a Liquidated Damages Event. The Parties agree that the Liquidated Damages represent solely the damages and injuries sustained by the State in losing the benefit of the bargain with Contractor and do not include any injury or damage sustained by a third party. The Contractor agrees that the Liquidated Damages are in addition to any amounts Contractor may owe the State pursuant to the indemnity provision or any other sections of this Contract.

The State is not obligated to assess Liquidated Damages before availing itself of any other remedy. The State may choose to discontinue Liquidated Damages and avail itself of any other remedy available under this Contract or at law or equity.



- E.14. Partial Takeover of Contract. The State may, at its convenience and without cause, exercise a partial takeover of any service that the Contractor is obligated to perform under this Contract, including any service which is the subject of a subcontract between Contractor and a third party (a "Partial Takeover"). A Partial Takeover of this Contract by the State shall not be deemed a breach of contract. The Contractor shall be given at least thirty (30) days prior written notice of a Partial Takeover. The notice shall specify the areas of service the State will assume and the date the State will be assuming. The State's exercise of a Partial Takeover shall not alter the Contractor's other duties and responsibilities under this Contract. The State reserves the right to withhold from the Contractor any amounts the Contractor would have been paid but for the State's exercise of a Partial Takeover. The amounts shall be withheld effective as of the date the State exercises its right to a Partial Takeover. The State's exercise of its right to a Partial Takeover of this Contract shall not entitle the Contractor to any actual, general, special, incidental, consequential, or any other damages irrespective of any description or amount.
- E.15. Unencumbered Personnel. The Contractor shall not restrict its employees, agents, subcontractors or principals who perform services for the State under this Contract from performing the same or similar services for the State after the termination of this Contract, either as a State employee, an independent contractor, or an employee, agent, subcontractor or principal of another contractor with the State.
- E16 Personally Identifiable Information. While performing its obligations under this Contract, Contractor may have access to Personally Identifiable Information held by the State ("PII"). For the purposes of this Contract, "PII" includes "Nonpublic Personal Information" as that term is defined in Title V of the Gramm-Leach-Bliley Act of 1999 or any successor federal statute, and the rules and regulations thereunder, all as may be amended or supplemented from time to time ("GLBA") and personally identifiable information and other data protected under any other applicable laws, rule or regulation of any jurisdiction relating to disclosure or use of personal information ("Privacy Laws"). Contractor agrees it shall not do or omit to do anything which would cause the State to be in breach of any Privacy Laws. Contractor shall, and shall cause its employees, agents and representatives to: (i) keep PII confidential and may use and disclose PII only as necessary to carry out those specific aspects of the purpose for which the PII was disclosed to Contractor and in accordance with this Contract, GLBA and Privacy Laws; and (ii) implement and maintain appropriate technical and organizational measures regarding information security to: (A) ensure the security and confidentiality of PII; (B) protect against any threats or hazards to the security or integrity of PII; and (C) prevent unauthorized access to or use of PII. Contractor shall immediately notify State: (1) of any disclosure or use of any PII by Contractor or any of its employees, agents and representatives in breach of this Contract; and (2) of any disclosure of any PII to Contractor or its employees, agents and representatives where the purpose of such disclosure is not known to Contractor or its employees, agents and representatives. The State reserves the right to review Contractor's policies and procedures used to maintain the security and confidentiality of PII and Contractor shall, and cause its employees, agents and representatives to, comply with all reasonable requests or directions from the State to enable the State to verify and/or procure that Contractor is in full compliance with its obligations under this Contract in relation to PII. Upon termination or expiration of the Contract or at the State's direction at any time in its sole discretion, whichever is earlier, Contractor shall immediately return to the State any and all PII which it has received under this Contract and shall destroy all records of such PII.

The Contractor shall report to the State any instances of unauthorized access to or potential disclosure of PII in the custody or control of Contractor ("Unauthorized Disclosure") that come to the Contractor's attention. Any such report shall be made by the Contractor within twenty-four (24) hours after the Unauthorized Disclosure has come to the attention of the Contractor. Contractor shall take all necessary measures to halt any further Unauthorized Disclosures. The Contractor, at the sole discretion of the State, shall provide no cost credit monitoring services for individuals whose PII was affected by the Unauthorized Disclosure. The Contractor shall bear the cost of notification to all individuals affected by the Unauthorized Disclosure, including individual letters and public notice. The remedies set forth in this Section are not exclusive and are in addition to any claims or remedies available to this State under this Contract or otherwise available at law.

E.17 Survival. The terms, provisions, representations, and warranties contained in this Contract which by their sense and context are intended to survive the performance and termination of this Contract, shall so survive the completion of performance and termination of this Contract.

IN WITNESS WHEREOF,

QUESTAR ASSESSMENT, INC.:

[Handwritten Signature]

July 6, 2016

CONTRACTOR SIGNATURE

DATE

BRAD M. BAUMGARTNER Chief Partner Officer

PRINTED NAME AND TITLE OF CONTRACTOR SIGNATORY (above)

TENNESSEE DEPARTMENT OF EDUCATION:

Candice McQueen

July 6, 2016

CANDICE MCQUEEN, COMMISSIONER

DATE



ATTACHMENT A

ATTESTATION RE PERSONNEL USED IN CONTRACT PERFORMANCE

SUBJECT CONTRACT NUMBER:	50753
CONTRACTOR LEGAL ENTITY NAME:	Questar Assessment, Inc.
EDISON VENDOR IDENTIFICATION NUMBER:	196257

The Contractor, identified above, does hereby attest, certify, warrant, and assure that the Contractor shall not knowingly utilize the services of an illegal immigrant in the performance of this Contract and shall not knowingly utilize the services of any subcontractor who will utilize the services of an illegal immigrant in the performance of this Contract.

CONTRACTOR SIGNATURE

NOTICE: This attestation MUST be signed by an individual empowered to contractually bind the Contractor. Attach evidence documenting the individual's authority to contractually bind the Contractor, unless the signatory is the Contractor's chief executive or president.

Brad M. Baumgartner Chief Partner Off. 2012

PRINTED NAME AND TITLE OF SIGNATORY

July 6, 2016

DATE OF ATTESTATION



ATTACHMENT B

LIQUIDATED DAMAGES

PRODUCT DESCRIPTION	Cost per State work day
A.4 Schedule	
A.4.a. Annual Work Plan	\$25,000.00
A.4.a Annual Work Plan Review	\$25,000.00
A. 5. Operations Management	
A. 5. a-g. Operations Management (includes administrative tasks, continuity activities, management meetings)	\$10,000.00
A.5.h. Technical Support Services	\$50,000.00
A.6. Development Activities	
A.6.d. Test Specifications (includes full item specifications A.6.e)	\$25,000.00
A.6.g. Alignment Study	\$25,000.00
A.6.g. Additional Alignment Studies	\$10,000.00
A.6.f, h-n. SR Test Construction (includes item and form development)	\$25,000.00
A.6.f, h-n.CR Test Construction (includes item and form development)	\$25,000.00
A.6.h(8)xi-xxii Passage/Item Review Meetings	\$10,000.00
A.6.h(8)xxiii Sight Reviews	\$10,000.00
A.7. Psychometric Activities	
A.7.b Equating Study	\$25,000.00
A. 7.b-c & v. Research Studies	\$10,000.00



PRODUCT DESCRIPTION	Cost per State work day
A.7.u. Standard Setting	\$25,000.00
A.7.v. TAC Meetings (4-10 participants) 1-2 days	\$15,000.00
A.7.aa Technical Report	\$50,000.00
A.7.kk. Comparability Study	\$15,000.00
A.8 Assessment Materials	
A.8.b Training Meetings and Materials	\$5,000.00
A.8.c Prepration Materials	
A.8.c.(1) On-line Item Tools	\$15,000.00
A.8.c.(2) Practice test - Development (include electronic version, teacher directions, and 50-75 practice items)	\$15,000.00
A.8.c.(2) Practice Test Book	\$25,000.00
A.8.c.(2) Large Print Practice Test	\$25,000.00
A.8.c.(2) Braille Practice Test	
A.8.c.(2) Braille Practice Test Development (include electronic version & teacher directions)	\$25,000.00
A.8.c.(2) Braille Practice Test Book	\$25,000.00
A.8.c.(2) iii Audio practice test development (master)	\$15,000.00
A.8.c.(2) iii Audio Practice Test CD	\$15,000.00
A.8.d Modified Materials	
A.8.d.(1) Braille Test Development	\$25,000.00
A.8.d.(1) i Braille audio development (master)	\$25,000.00
A.8.d.(1) Braille Test Book	\$25,000.00



PRODUCT DESCRIPTION	Cost per State work day
A.8.d.(1) i Braille audio CD	\$25,000.00
A.8.d.(2) Large Print Test Book	\$25,000.00
A.8.e. Administrative Materials	
A.8.e.(1-2) Online User's Guide	\$30,000.00
A.8.e.(3) Test Administration Manual Development (include web optimized pdf version)	\$25,000.00
A.8.e.(4) Test Administrator/Proctor Scripts (include web optimized pdf version)	\$25,000.00
A.8.e.(5-6) Teacher Header	\$25,000.00
A.8.e.(7) Comprehensive GTI (includes web optimized pdf version)	\$25,000.00
A.8.e.(7) Parent Brochure	\$25,000.00
A.8.f. Assessment Materials	
A.8.f.(1) Online Platform - application, maintenance, customization, updates	\$50,000.00
A.10.f.(1) Online Assessment	\$50,000.00
A.8.f.(2) Student Test Books	
A.8.f.(2) Two content areas	\$25,000.00
A.8.f.(2) One content area	\$25,000.00
A.8.f.(3) Student Response Documents	
A.8.f.(3) Multi-page	\$25,000.00
A.8.f.(3) One Sheet	\$25,000.00
A.9 Assessment Materials Packaging and Distribution	
A.9.b Packaging and Distribution	\$25,000.00
A.9.c. Inventory Management	



PRODUCT DESCRIPTION	Cost per State work day
A.9.c. Inventory Management Setup (includes website setup & customization, support documentation and training, equipment)	\$25,000.00
A.9.c. Inventory Management Support & maintenance	\$25,000.00
A.10 & A.11. Technical and Functional Requirements	
A.11.a. Custom programming	\$15,000.00
A.11.a. Website Hosting	\$25,000.00
A.11.c. Enrollment and data provisioning	
A.11.c. Enrollment Setup (includes website setup & customization, support documentation and training)	\$25,000.00
A.11.c. Enrollment Support & maintenance (includes data upload from state/systems)	\$25,000.00
A.11.c. Pre-code response documents-mult-page	\$25,000.00
A.11.c. Pre-code response documents - single sheet	\$25,000.00
A.12. Processing Activities	
A.12. Assessment Processing (includes scanning, editing, SR scoring, and reporting)	\$50,000.00
A.13 Scoring Activities	
A.13.e(4) Range Finding	\$25,000.00
A.13.e 8) CRA Scoring w/ 2 hand scorers	\$50,000.00
A.14. Reporting Activities	
A.14.f. Online Reporting Setup (includes report customization)	\$50,000.00
A.14.f. Online Reporting Support and Maintenance (includes training and posting of all reports)	\$50,000.00



PRODUCT DESCRIPTION	Cost per State work day
A.14.j Paper Reports / Labels	
A.14.j Student Reports grade 3-8	\$25,000.00
A.14.j EOC Student Reports	\$25,000.00
A.14.j Student Labels grades 3-8	\$25,000.00
A.14.j EOC Student Labels	\$25,000.00
A.14.j Comprehensive Data Files (CDF)	\$50,000.00



CONTRACT AMENDMENT COVER SHEET

Agency Tracking # 33111-01816	Edison ID 50753	Contract # N/A	Amendment # 01		
Contractor Legal Entity Name Questar Assessment, Inc.			Edison Vendor ID 196257		
Amendment Purpose & Effect(s) Add a provision related to the licensing of third party materials for use in this Contract					
Amendment Changes Contract End Date: NO		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	End Date: Nov. 30, 2018		
TOTAL Contract Amount INCREASE or DECREASE per this Amendment (zero if N/A):			\$ 0.00		
Funding —					
FY	State	Federal	Interdepartmental	Other	TOTAL Contract Amount
2017	\$23,887,500.00	\$6,112,500.00	\$0.00	\$0.00	\$30,000,000.00
2018	\$23,887,500.00	\$6,112,500.00	\$0.00	\$0.00	\$30,000,000.00
2019	\$23,887,500.00	\$6,112,500.00	\$0.00	\$0.00	\$30,000,000.00
2020	\$23,887,500.00	\$6,112,500.00	\$0.00	\$0.00	\$30,000,000.00
2021	\$23,887,500.00	\$6,112,500.00	\$0.00	\$0.00	\$30,000,000.00
TOTAL:	\$119,437,500.00	\$30,562,500	\$0.00	\$0.00	\$150,000,000.00
American Recovery and Reinvestment Act (ARRA) Funding: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO					
Budget Officer Confirmation: There is a balance in the appropriation from which obligations hereunder are required to be paid that is not already encumbered to pay other obligations.			<i>CPO USE</i>		



**AMENDMENT 01
OF CONTRACT 50753**

This Amendment is made and entered by and between the State of Tennessee, Department of Education, hereinafter referred to as the "State" and Questar Assessment, Inc., hereinafter referred to as the "Contractor." For good and valuable consideration, the sufficiency of which is hereby acknowledged, it is mutually understood and agreed by and between said, undersigned contracting parties that the subject contract is hereby amended as follows:

1. The following is added as Contract section A.15 and all subsequent sections are numbered accordingly.

The State entered into a licensing agreement with American Institutes for Research (AIR) for items used in the 2015-16 assessment in order to have enough operational or linking items to build an aligned assessment for the 2016-17 assessment. AIR shall be designated as a third party beneficiary of this Contract for the sole and limited purpose of allowing AIR, in its sole discretion and not as an obligation, to pursue claims directly against Contractor in the event Contractor makes any unauthorized use, disclosure or release of AIR's licensed materials.

2. Contract section D.2. is deleted in its entirety and replaced with the following:

D.2. Communications and Contacts. All instructions, notices, consents, demands, or other communications required or contemplated by this Contract shall be in writing and shall be made by certified, first class mail, return receipt requested and postage prepaid, by overnight courier service with an asset tracking system, or by email or facsimile transmission with recipient confirmation. All communications, regardless of method of transmission, shall be addressed to the respective Party at the appropriate mailing address, facsimile number, or email address as stated below or any other address provided in writing by a Party.

The State:

Dr. Nakia T. Towns, Assistant Commissioner
Department of Education, Division of Data and Research
Andrew Johnson Tower, 10th Floor
710 James Robertson Parkway
Nashville, TN 37243
nakia.towns@tn.gov
Telephone # (615) 487-2459
FAX # (615) 532-7510

The Contractor:

Primary contact:
Marty Mineck, Vice President, State Solutions
Questar Assessment, Inc.
5550 Upper 147th Street West
Apple Valley, MN 55124
mmineck@questarai.com
Telephone # (319) 800-9032

Secondary contact:
Brad Baumgartner, Chief Partner Officer
Questar Assessment, Inc.
5550 Upper 147th Street West
Apple Valley, MN 55124
bbaumgartner@questarai.com
Telephone # (317) 586-5095



Required Approvals. The State is not bound by this Amendment until it is signed by the contract parties and approved by appropriate officials in accordance with applicable Tennessee laws and regulations (depending upon the specifics of this contract, said officials may include, but are not limited to, the Commissioner of Finance and Administration, the Commissioner of Human Resources, and the Comptroller of the Treasury).

Amendment Effective Date. The revisions set forth herein shall be effective April 20, 2017. All other terms and conditions of this Contract not expressly amended herein shall remain in full force and effect.

IN WITNESS WHEREOF,

QUESTAR ASSESSMENT, INC.:

1/23/2017

SIGNATURE

DATE

Brad Baumgartner, Chief Partner Officer

PRINTED NAME AND TITLE OF SIGNATORY (above)

TENNESSEE DEPARTMENT OF EDUCATION:

3/24/17

CANDICE MCQUEEN, COMMISSIONER

DATE



CONTRACT AMENDMENT COVER SHEET

Agency Tracking # 33111-01816	Edison ID 50753	Contract # 50753	Amendment # 2		
Contractor Legal Entity Name Questar Assessment, Inc.			Edison Vendor ID 196257		
Amendment Purpose & Effect(s) Decrease maximum liability, extend contract term, update scope, add Key Performance Indicators, update payment methodology and liquidated damages					
Amendment Changes Contract End Date: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		End Date: November 30, 2019			
TOTAL Contract Amount INCREASE or DECREASE per this Amendment (zero if N/A):			(\$64,000,000.00)		
Funding —					
FY	State	Federal	Interdepartmental	Other	TOTAL Contract Amount
2017	\$21,536,835.00	\$8,463,165.00	\$0.00	\$0.00	\$30,000,000.00
2018	\$23,887,500.00	\$6,112,500.00	\$0.00	\$0.00	\$30,000,000.00
2019	\$16,771,292.00	\$9,223,708.00	\$0.00	\$0.00	\$25,995,000.00
2020	\$5,000.00	\$0.00	\$0.00	\$0.00	\$5,000.00
TOTAL:	\$62,200,627.00	\$23,799,373.00	\$0.00	\$0.00	\$86,000,000.00
American Recovery and Reinvestment Act (ARRA) Funding: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO					
Budget Officer Confirmation: There is a balance in the appropriation from which obligations hereunder are required to be paid that is not already encumbered to pay other obligations.				<i>CPO USE</i>	
Speed Chart (optional) Various		Account Code (optional) Various			

**AMENDMENT 2
OF CONTRACT 50753**

This Amendment is made and entered by and between the State of Tennessee, Department of Education, hereinafter referred to as the "State" and Questar Assessment, Inc., hereinafter referred to as the "Contractor." For good and valuable consideration, the sufficiency of which is hereby acknowledged, it is mutually understood and agreed by and between said, undersigned contracting parties that the subject contract is hereby amended as follows:

1. The following is added as A.2.ooo.

ooo. Service Anomaly - Confirmed outage, slow down or other disruption to testing service delivery, lasting greater than 5 minutes, including; functional non-conformities, that negatively impacts the student testing experience in one or more entire classes and is caused by any software or infrastructure provided or managed by the Contractor or a sub-contractor of the Contractor. Measurement of anomaly start time to be based on first verifiable occurrence of event.

2. The following is added as A.2.ppp

ppp. Wait time: Elapsed time from connection of the call to time caller receives response by human or automated service.

3. Contract section A.5.c.(7) is deleted in its entirety and replaced with the following:

(7) Upon request, return all content owned by the State in a QTI electronic format.

4. Contract section A.5.h.(2) is deleted in its entirety and replaced with the following:

(2) Log, document, and summarize comments, complaints, and questions from schools and EAs regarding services and products provided by the Contractor. Provide a contact support ticket system that tracks issue types, status, and resolution for telephone, internet chat and email support. Accept support tickets generated from the State's existing EdTools platform using Contractor's standard email, telephone or chat capabilities. The Contractor shall establish a method of ensuring that issues identified via support tickets are analyzed to determine if further redress should be included in future technical documentation and/or software development updates to online applications. The Contractor shall provide both detail and summary customer service logs on a weekly basis for two weeks leading up to each operational window. The frequency shall increase to daily throughout the operational window.

5. Contract section A.6.h.(2)i is deleted in its entirety and replaced with the following:

- i. The assessment shall reflect the focus of the standards, defined as follows: the majority of score points should focus on the content defined as major work of the grade in the Tennessee Academic Standards

6. Contract sections A.6.h.(2)ii-v is deleted in its entirety.

7. The following is added as Contract section A.8.f.(3).vi.l)

- l) Report of irregularity status

8. The following is added as Contract section A.10.c.(7).

(7) The Contractor shall provide test forms, user accounts, software access and computer capacity to support the coordination and execution of a one-day, multi-state stress test designed to ensure that the impact of aggregate, concurrent loads from all states who typically test at the same time as Tennessee is understood and can be planned for ahead of

- operational testing. The Contractor shall perform a Tennessee-only platform verification. Tennessee will be placed on separate load balancer from other states as needed to ensure that activity in another state cannot impact Tennessee.
9. The following is added as Contract section A.10.f(6).
- (6) The Contractor shall complete internal controls questionnaire if requested by the State's Comptroller.
- The Contractor shall ensure that a current SOC 2 audit is obtained for all partner organizations or sub-contractors utilized by the Contractor in the delivery of services to the State prior to the commencement of operational testing for 2018-19.
10. The following is added as Contract section A.10.n.(1) and all subsequent subsections are renumbered accordingly.
- (1) The Contractor agrees to engage a qualified third party approved by the State to provide real-time monitoring and diagnostics throughout the operational testing window. The cost of the engagement shall be borne by the Contractor.
11. The following is added as Contract section A.10.r.
- r. The Contractor shall support an independent, third-party review of all components involved in end-to-end service delivery including granting the necessary access to systems source codes and configurations. This shall include execution of both Phase 1 (discovery and service mapping) and Phase 2 (remediation steps). The scope of the engagement and the third-party vendor shall be approved by the State. The cost associated with Phase 1 shall be borne by the State as a reduction of compensatory amounts agreed to for events that occurred in 2017-18. The cost of Phase 2 shall be borne by the Contractor.
12. Contract section A.11.b.(5)i is deleted in its entirety and replaced with the following:
- i. Student management – the ability to add and delete (un-enroll) students at the school and classroom level.
13. Contract section A.11.b.(6)i is deleted in its entirety and replaced with the following:
- i. The Contractor shall work with the State and the State's technology vendor to provide integration of data from all online applications into the State's Education Information System (EIS) architecture via web services.
14. Contract section A.11.b.(6)ii is deleted in its entirety and replaced with the following:
- ii. The Contractor shall work with the State and the State's technology vendor to receive data from the State's EIS via web services.
15. The following is added as Contract section A.11.d.
- d. The Contractor shall implement a viable mechanism for recovering all or partial student work due to the inability to submit or secure browser crash. For the purpose of recovering student work in an event of an unexpected outage, recovery of all Contractor systems shall be completed within the testing administration window for verification of that work and that the status of the recovery shall be visible to the school district that requested the recovery. If cache recovery is needed in the final 3 days of the testing window, the Contractor shall keep the testing administration window open to allow for cache recovery verification to be completed.
16. Contract section A.13.e.(1) is deleted in its entirety and replaced with the following:

- (1) Scoring of ELA and U.S. History CR items shall include a minimum of two human readers. Two human readers shall not be assigned on other CR items unless requested by the State. The Contractor may include the use of computer generated scores for comparison. CR items must have an inter-rater exact score agreement of .70 with human and computer scores for reliability and validity. The Contractor shall provide a report of results for the comparability study to include security between paper and pencil versus computer based testing.

17. The following is added as Contract section A.16 and all subsequent sections are numbered accordingly.

A.16. Below is a scorecard and Key Performance Indicators (KPIs) that will be used to measure the Contractor's performance against desired outcomes. The scorecard and KPIs shall be utilized to evaluate the Contractor's performance for the purpose of determining the percentage to be paid to the Contractor for the associated Contract deliverables. The State reserves the right to exercise any other rights available to it under this Contract or at law or equity in lieu of reductions under this Section provided that if the State reduces a payment percentage based on this Section 16 for a delay, outage, error, failure to deliver or other missed deliverable, the State will not also be entitled to impose liquidated damages for the same delay, outage, error, failure to deliver or other missed deliverable. All dates upon which these KPIs are based will be the dates contained in the work plan. No dates shall be changed without the written agreement of both parties, and no dates that have not been so agreed to will be the basis for any payment reductions contained in this or any other section. Fees at risk as identified on the scorecard shall be assessed relative to the assessment window in which the issue/metric occurred. The score card and KPIs shall only apply where the issue/metric has been verified.

Performance Categories	Issue/Metric	Payment Rate	Documentation Method	Cost Proposal Line Items
Customer Service	Average wait time for phone and live chat ≤ 5 minutes during call center hours Max wait time < 10 -minutes during call center hours 100% emails and voicemails responded to within 36 hours 95% of issues resolved within 3 business days	1.0	Customer Service Logs Vendor Summary Reports	A.5.h.
	Average wait time for phone and live chat ≤ 10 minutes during call center hours Max wait time ≤ 15 -minutes during call center hours 100% of emails and voicemails responded to within 48 hours 85% of issues resolved within 3 business days	0.8		
	Average wait time for phone and live chat ≤ 15 minutes during call center hours Max wait time ≥ 20 minutes during call center hours Less than 85% of issues resolved within 3 business days	0.5		
	Average wait time for phone and live chat ≥ 15 minutes during call center hours Max wait time ≥ 30 minutes during call center hours Less than 75% of issues resolved within 3 business days	0.0		

Performance Categories	Issue/Metric	Payment Rate	Documentation Method	Cost Proposal Line Items
Quality of Computer-Based Testing (CBT) Experience	Zero Service Anomalies.	1.0	Customer Service Logs State Technology Directors' Open Line Call Logs State Assessment Logistics emails	A.8.f.(1), A.2.000.
	No more than one Service Anomaly lasting less than thirty minutes.	.80		
	No more than two Service Anomalies lasting less than thirty minutes each OR one Service Anomaly lasting in excess of thirty minutes but less than sixty minutes.	.70		
	More than two Service Anomalies OR any one Service Anomaly lasting in excess of sixty minutes.	0.30		
Quality of PBT Experience	All paper test materials (initial orders) are delivered to all sites in accordance with the agreed-upon dates from the work plan and are in good condition (>95% of printed materials are free of errors and shipping materials are not significantly damaged).	1.0	Customer Service Logs State Assessment Logistics emails Work plan	A.8.f.(2), A.9.b
	All paper test materials (initial orders) are delivered to all sites within 2 business days of the agreed-upon dates from the work plan and are in good condition (>95% of printed materials are free of errors and shipping materials are not significantly damaged). Damaged test materials are not replaced prior to first day of the administration.	.80		
	All paper test materials (initial orders) are delivered to all sites more than 2 business days of the agreed-upon dates from the work plan and/or are in poor condition (>5% of printed materials have printing errors or shipping materials are significantly damaged). Damaged test materials are not replaced prior to first day of the administration.	.40		
Timeliness	>=95% of work plan deliverables listed in the work plan) by the Contractor are delivered on	1.0	Work plan Online tracking	A.5.a-g

Performance Categories	Issue/Metric	Payment Rate	Documentation Method	Cost Proposal Line Items
	or before agreed-upon dates.		logs Emails	
	94.9%-85% of work plan deliverables listed in the work plan by the Contractor are delivered on or before agreed-upon dates.	.80		
	<85% of work plan deliverables listed in the work plan by the Contractor are delivered on or before agreed-upon dates.	.60		
Reports	All reports are delivered on or before the agreed-upon dates from the work plan and contain accurate scale scores and performance level classifications such that there is no need to recalculate and/or republish test results that have been publicly reported (outside of the State).	1.0	Work plan Data files provided by the Contractor Feedback collected from districts	A.14.f, A.14.j
	90% of reports are delivered on or before the agreed-upon dates from the work plan and contain accurate scale scores and performance level classifications such that there is no need to recalculate and/or republish test results that have been publicly reported (outside of the State).	.85		
	75% of reports are delivered on or before the agreed-upon dates from the work plan and 90% of reports contain accurate scale scores and performance level classifications such that there is no need to recalculate and/or republish test results that have been publicly reported (outside of the State).	.70		

18. The following is added as Contract section A.16. and all subsequent sections are numbered accordingly.
- a. To minimize the risks inherent in active software development, the Contractor shall establish a new version of NextEra and supporting systems as required to implement the end-to-end functional requirements of the summative assessment program in Tennessee, including; the Test Delivery System (TDS), data provisioning, scoring, test session administration and reporting that has controls designed to limit high-risk development activities.
 - b. The new version of NextEra will be created by working backwards chronologically from the current version to identify the most stable and reliable version of NextEra to use as a starting point, (the “Stable Version”).
 - c. The Stable Version of NextEra will be the prior version that most closely matches all the following criteria:
 - a. Highest percentage of code that has been proven stable and reliable through successful operational use,
 - b. Lowest percentage of code that has not undergone successful field testing,

- c. Lowest percentage of code that contributed to or was suspected of contributing to a prior failure,
 - d. Highest percentage of code that meets the known functional requirements of the TN assessment program in the 18/19 school year,
 - e. Lowest percentage of code that is not required by the Tennessee assessment program in the 18/19 school year.
- d. The Stable Version of NextEra will undergo thorough and rigorous quality assurance testing that will commence as soon as the Stable Version is identified and re-established into a suitable development environment.
 - e. The Contractor shall provide the State with visibility into the quality assurance testing program of the Stable Version, which will include;
 - a. An overview of the QA personnel that have been dedicated to this process,
 - b. The project plan governing execution of the quality assurance process,
 - c. The test plans being executed, with emphasis on functional testing as needed to ensure the Stable Version is performing to the service expectations outlined in the Contract.
 - f. The Stable Version of NextEra will undergo additional development that is strictly limited to the State's requests defined as the "simplification requests", which include; text-to-speech (TTS) reversion to a client-side model and data simplifications, to produce the final version of NextEra for the 18/19 school year, (the "Final Version").
 - g. The Final Version of NextEra will undergo thorough and rigorous quality assurance testing that is inclusive of:
 - a. Unit testing of the new development work,
 - b. Regression testing once new development work has been integrated into the Stable Version to produce the Final Version,
 - c. Comprehensive functional testing of the Final Version, including; automation and code coverage testing to ensure all code paths have been exercised in a test case,
 - d. Load and scale testing of the Final Version to ensure supporting infrastructure has been designed and sized adequately to accommodate expected loads and safety margins needed in the 18/19 school year,
 - e. Simulations against the Final Version and supporting infrastructure to test and ensure resilience to and recoverability from external events, such as; DDOS attacks and fiber outages.
 - h. The Contractor shall permit the State to have access to test case results at each sprint across the lifecycle of both the Stable Version and the Final Version, and include the State in defect triage and prioritization exercises until such time as the State has accepted the Final Version.
 - i. The Contractor shall deliver the fully quality assured Final Version of NextEra by October 1st, 2018.
 - j. The State will conduct User Acceptance Testing (UAT) of the Final Version between October 1st, 2018 and October 15th, 2018.
 - k. The State will conduct load, stress and resilience testing in partnership with the Contractor at appropriate times in the development lifecycle of the Final Version and prior to October 15th 2018.
 - l. Once the State has accepted the Final Version of NextEra, no changes of any kind may be applied to the Final Version without the approval of the State for the duration of the 18/19 assessment season.

19. Contract Section B is deleted in its entirety and replaced with the following:

B.1. TERM OF CONTRACT

This Contract shall be effective for the period beginning on July 13, 2016 (“Effective Date”) and ending on November 30, 2019, (“Term”). The State shall have no obligation for goods delivered or services provided by the Contractor prior to the Effective Date.

B.2. Renewal Options. This Contract may be renewed upon satisfactory completion of the Term. The State reserves the right to execute up to two (2) renewal options under the same terms and conditions for a period not to exceed twelve (12) months each by the State, at the State's sole option. In no event, however, shall the maximum Term, including all renewals or extensions, exceed a total of sixty (60) months.

B.3. Term Extension. The State may extend the Term an additional period of time, not to exceed one hundred-eighty (180) days beyond the expiration date of this Contract, under the same terms and conditions, at the State’s sole option. In no event, however, shall the maximum Term, including all renewals or extensions, exceed a total of sixty (60) months.

20. Contract section C.1 is deleted in its entirety and replaced with the following:

C.1. Maximum Liability. In no event shall the maximum liability of the State under this Contract exceed one hundred twelve million dollars and zero cents (\$112,000,000. 00) (“Maximum Liability”). This Contract does not grant the Contractor any exclusive rights. The State does not guarantee that it will buy any minimum quantity of goods or services under this Contract. Subject to the terms and conditions of this Contract, the Contractor will only be paid for goods or services provided under this Contract after a purchase order is issued to Contractor by the State or as otherwise specified by this Contract.

21. Contract section C.3.b is deleted in its entirety and replaced with the following:

a. The Contractor shall be compensated based upon the following payment methodology:

The following projected quantities were used to determine the evaluation factor for each fiscal year for each cost item line: Per Test = A Single Reportable Score per content area per student (A single test may be administered over multiple administration windows or subtests. A test will include 50-75 items worth 50-100 score points.) Per Administration = 2 (Fall and Spring) Per (Online) Application =3 [Three functional applications are defined which encompass (1) computer based testing - including practice tools and enrollment/pre-id, A.8.c; A.8.f, A.11.c; (2) materials management (inventory), A.9.c; and (3) reporting, A.14.f-g.] Per Assessment Program = 3 (ACH, EOC, ALT) Per Content Area = Max 18 (12 EOC; 4 ACH; 2 Alt); ELA & Math Only (9 EOC and 2 ACH) Per Grade = 6 (3-8 for ACH; grades are not used for EOC)	
GOODS OR SERVICES DESCRIPTION	AMOUNT (per compensable increment)
A.4. Schedule	
A.4.a. (1) Annual Work Plan	Per Work Plan
Year 1	\$5,741.52
Year 2	\$6,028.60
Year 3	\$6,330.03
Year 4	\$6,646.53

A.4.a.(1) Annual Work Plan Review	Per Meeting
Year 1	\$17,278.82
Year 2	\$16,399.76
Year 3	\$19,049.90
Year 4	\$18,080.74
A.5. Operations Management	
A. 5. a-g. Operations Management (includes administrative tasks, continuity activities, management meetings)	Per Assessment Per Content Area Per Grade Per Administration
Year 1	\$4,332.78
Year 2	\$4,408.95
Year 3	\$4,629.40
Year 4	\$4,860.87
A.5.h. Program Support Services	Per Application Per Assessment Per Admin
Year 1	\$6,535.09
Year 2	\$5,403.99
Year 3	\$4,956.41
Year 4	\$5,013.84
A.6. Development Activities (ELA and Math Only)	
A.6.d. Test Specifications (includes full item specifications A.6.e)	Per Assessment Per Admin
Year 1	\$328.95
Year 2	\$345.39
Year 3	\$362.66
Year 4	\$380.80
A.6.g. Alignment Study	Per Report
Year 1	\$8,771.93
Year 2	\$9,210.53
Year 3	\$9,671.05
Year 4	\$10,154.61
A.6.g. Additional Alignment Studies	Per Hour
Year 1	\$140.35
Year 2	\$147.37
Year 3	\$154.74
Year 4	\$162.47

A.6.f, h-n. Test Construction (includes item and form development - expect approx. 55 total operational items per form, versions for field testing are not considered separate forms)	Per Selected Response Form
Year 1	\$146.20
Year 2	\$153.51
Year 3	\$161.18
Year 4	\$169.24
A.6.f, h-n. Test Construction (includes item and form development - expect approx. 55 total operational items per form, versions for field testing are not considered separate forms)	Per Constructed Response Form (ELA only)
Year 1	\$146.20
Year 2	\$153.51
Year 3	\$161.18
Year 4	\$169.24
A.6.h(8)xi-xxii Passage/Item Review Meetings	
A.6.h(8)xi-xxii Small Meeting (1 day)	Per Meeting (content area/grade group)
Year 1	\$2,245.61
Year 2	\$2,357.89
Year 3	\$2,475.79
Year 4	\$2,599.58
A.6.h(8)xi-xxii Small Meeting (2-3 days)	Per Meeting (content area/grade group)
Year 1	\$3,368.42
Year 2	\$3,536.84
Year 3	\$3,713.68
Year 4	\$3,899.37
A.6.h(8)xi-xxii Small Meeting (4-5 days)	Per Meeting (content area/grade group)
Year 1	\$4,491.23
Year 2	\$4,715.79
Year 3	\$4,951.58
Year 4	\$5,199.16
A.6.h(8)xi-xxii Large Meeting(1 day)	Per Meeting (content area/grade group)
Year 1	\$3,438.60
Year 2	\$3,610.53
Year 3	\$3,791.05
Year 4	\$3,980.61

A.6.h(8)xi-xxii Large Meeting (2-3 days)	Per Meeting (content area/grade group)
Year 1	\$73,058.53
Year 2	\$76,711.46
Year 3	\$80,547.03
Year 4	\$84,574.38
A.6.h(8)xi-xxii Large Meeting (4-5 days)	Per Meeting (content area/grade group)
Year 1	\$6,023.53
Year 2	\$6,324.71
Year 3	\$6,640.94
Year 4	\$6,972.99
A.6.h(8)xxiii Sight Reviews	
A.6.h(8)xxiii. Ink Print/Braille (1 day)	Per Meeting (content area/grade group)
Year 1	\$752.94
Year 2	\$790.59
Year 3	\$830.12
Year 4	\$871.62
A.6.h(8)xxiii. Ink Print/Braille (2-3 days)	Per Meeting (content area/grade group)
Year 1	\$5,340.16
Year 2	\$5,607.16
Year 3	\$5,887.52
Year 4	\$6,181.90
A.7. Psychometric Activities	
A.7.b Equating Study	Per Report Per Grade and/or Content Area Per Year
Year 1	\$10,500.00
Year 2	\$10,750.00
Year 3	\$10,750.00
Year 4	\$11,000.00
A. 7. b-c & v. Research Studies	Per Hour
Year 1	\$156.14
Year 2	\$163.95
Year 3	\$172.14
Year 4	\$180.75

A.7.u. Standard Setting (including the TAC mtg and correlation to previous assessment if necessary and the options for annual progress measure first year)	Per Grade and/or Content Area
Year 1	\$14,079.78
Year 2	\$6,578.95
Year 3	\$6,907.89
Year 4	\$7,253.29
A.7.v. TAC Meetings (4-10 participants) 1-2 days	Per Meeting
Year 1	\$50,969.02
Year 2	\$53,517.47
Year 3	\$56,193.34
Year 4	\$59,003.01
A.7.aa. Technical Report (including all equating procedures & results, calibration, scaling, reliability & validity, item analysis and alignment)	Per Assessment (includes electronic version, CDs and hard copies)
Year 1	\$10,526.32
Year 2	\$11,052.63
Year 3	\$11,605.26
Year 4	\$12,185.53
A.7.kk. Comparability Study	Per Report
Year 1	\$3,122.81
Year 2	\$3,278.95
Year 3	\$3,442.89
Year 4	\$3,615.04
A.8 Assessment Materials	
A.8.b Training Meetings and Materials	
A.8.b. (1) Introductory Materials for System Coordinators	Per Set
Year 1	\$95.35
Year 2	\$100.12
Year 3	\$105.12
Year 4	\$110.38
A.8.b.(2) Introductory Materials for School Coordinators	Per Set
Year 1	\$18.00
Year 2	\$18.90
Year 3	\$19.85
Year 4	\$20.84
A.8.b. (1 & 2) Training Meetings	Per Location

Year 1	\$13,974.51
Year 2	\$14,673.24
Year 3	\$15,406.90
Year 4	\$16,177.24
A.8.b. (3) Materials for Regional Meetings	Per Set
Year 1	\$8.95
Year 2	\$9.40
Year 3	\$9.87
Year 4	\$8.52
A.8.b. (3) Regional Meetings	Per Location
Year 1	\$12,063.53
Year 2	\$12,666.71
Year 3	\$13,300.04
Year 4	\$13,965.04
A.8.c Preparation Materials	
A.8.c.(1) On-line Item Tools	Per Grade/Content Area /Assessment (3-11 only)
Year 1	\$0.00
Year 2	\$0.00
Year 3	\$0.00
Year 4	\$0.00
A.8.c.(2) Practice test - Development (include electronic version, teacher directions, and 50-75 practice items)	Per Grade/Content Area /Assessment (includes Alt)
Year 1	\$707.39
Year 2	\$3,702.94
Year 3	\$779.90
Year 4	\$818.90
A.8.c.(2) Practice Test Book	Per Book
Year 1	\$1.32
Year 2	\$4.14
Year 3	\$4.84
Year 4	\$5.08
A.8.c.(2) Large Print Practice Test	Per Test
Year 1	\$184.21
Year 2	\$202.63
Year 3	\$241.78
Year 4	\$253.87
A.8.c.(2) Braille Practice Test Development (include electronic version & teacher directions)	Per Grade/Content Area /Assessment

Year 1	\$137.47
Year 2	\$1,715.61
Year 3	\$151.56
Year 4	\$159.14
A.8.c.(2) Braille Practice Test Book	Per Test
Year 1	\$1,250.00
Year 2	\$1,500.00
Year 3	\$1,500.00
Year 4	\$1,750.00
A.8.c (2) Audio Practice Test development (master)	Per Grade/Content Area /Assessment
Year 1	\$61.78
Year 2	\$133.20
Year 3	\$68.11
Year 4	\$71.52
A.8.c.(2) Audio Practice Test CD	Per CD
Year 1	\$6.00
Year 2	\$6.25
Year 3	\$6.50
Year 4	\$6.75
A.8.d Modified Materials	
A.8.d.(1) Braille Test Development (Braille Book)	Per Grade/Content Area /Assessment
Year 1	\$1,905.85
Year 2	\$2,001.14
Year 3	\$2,101.20
Year 4	\$2,206.26
A.8.d.(1) Braille audio development (master)	Per Grade/Content Area /Assessment
Year 1	\$126.86
Year 2	\$133.20
Year 3	\$139.86
Year 4	\$146.85
A.8.d.(1) Braille Test Book	Per Test
Year 1	\$1,250.00
Year 2	\$1,500.00
Year 3	\$1,500.00
Year 4	\$1,750.00
A.8.d.(1) i Braille audio CD	Per CD set/student
Year 1	\$15.30

Year 2	\$16.06
Year 3	\$16.87
Year 4	\$17.71
A.8.d.(2) Large Print Test Book	Per Test
Year 1	\$75.00
Year 2	\$100.00
Year 3	\$100.00
Year 4	\$150.00
A.8.e. Administrative Materials	
A.8.e.(1-2) Computer-based User's Guide	Per Guide
Year 1	\$1,971.93
Year 2	\$2,070.53
Year 3	\$2,174.05
Year 4	\$2,282.76
A.8.e.(3) Test Administration Manual Development (include web optimized pdf version with test administrator/proctor scripts)	Per Manual
Year 1	\$1,800.00
Year 2	\$1,800.00
Year 3	\$1,800.00
Year 4	\$1,600.00
A.8.e.(3) Test Administration Manual (TAM)	Per Manual (printed)
Year 1	\$1.30
Year 2	\$1.37
Year 3	\$1.44
Year 4	\$1.51
A.8.e.(4) Test Administrator/Proctor Scripts (include web optimized pdf version)	Per Script (printed)
Year 1	\$1.16
Year 2	\$1.22
Year 3	\$1.28
Year 4	\$1.35
A.8.e.(5-6) Teacher Header	All Assessments Per Header
Year 1	\$0.11
Year 2	\$0.14
Year 3	\$0.18
Year 4	\$1.23
A.8.e.(7) Guide to Test Interpretation GTI	

A.8.e.(7) Comprehensive GTI (includes development and web optimized pdf version)	Per Assessment
Year 1	\$2,000.00
Year 2	\$1,800.00
Year 3	\$1,800.00
Year 4	\$1,600.00
A.8.e.(7) Parent Brochure	Per Brochure
Year 1	\$0.20
Year 2	\$0.22
Year 3	\$0.22
Year 4	\$0.24
A.8.f. Assessment Materials	
A.8.f.(1) Computer-Based Testing Platform - application, maintenance, customization, updates	Per Assessment / Per Admin
Year 1	\$0.00
Year 2	\$0.00
Year 3	\$0.00
Year 4	\$0.00
A.8.f.(1) Computer-based Assessment	Per Student tested (per assessment per grade and/or content area)
Year 1	\$0.62
Year 2	\$0.57
Year 3	\$0.48
Year 4	\$0.50
A.8.f.(2) Student Test Books	
A.8.f.(2) Two content areas (grade 3-8)	Per Test
Year 1	\$5.00
Year 2	\$8.00
Year 3	\$8.00
Year 4	\$8.00
A.8.f.(2) One content area (HS)	Per Test
Year 1	\$4.67
Year 2	\$7.21
Year 3	\$7.21
Year 4	\$7.21
A.8.f.(3) Student Response Documents	
A.8.f.(3) Multi-page	Per Document

Year 1	\$0.17
Year 2	\$0.26
Year 3	\$0.26
Year 4	\$5.83
A.8.f.(3) One Sheet	Per Document
Year 1	\$0.17
Year 2	\$0.26
Year 3	\$0.26
Year 4	\$0.26
A.9. Assessment Materials Packaging and Distribution	
A.9.b Packaging and Distribution	Per LEA/Per Assessment/Admin
Year 1	\$600.00
Year 2	\$500.00
Year 3	\$500.00
Year 4	\$500.00
A.9.c. Inventory Management	
A.9.c Inventory Management Setup (includes website setup & customization, support documentation and training, equipment)	Per Assessment/Year
Year 1	\$17,440.35
Year 2	\$13,527.19
Year 3	\$9,179.12
Year 4	\$9,638.07
A.9.c. Inventory Management Support & maintenance	Per Assessment/Admin
Year 1	\$0.00
Year 2	\$0.00
Year 3	\$0.00
Year 4	\$0.00
A.10 & A.11. Technical and Functional Requirements	
A.11.a Custom programming	Per Hour
Year 1	\$169.82
Year 2	\$60.79
Year 3	\$63.83
Year 4	\$67.02
A.8.c; A.8.f, A.11.c Website Hosting	Per Application/Month
Year 1	\$3,918.13
Year 2	\$4,021.16
Year 3	\$3,743.50

Year 4	\$3,930.68
A.11.c. Enrollment and data provisioning	
A.11.c. Enrollment Setup (includes website setup & customization, support documentation and training)	Per Assessment/Year
Year 1	\$3,964.91
Year 2	\$2,542.11
Year 3	\$2,669.21
Year 4	\$2,802.67
A.11.c. Enrollment Support & maintenance (includes data upload from state/systems)	Per Assessment/Admin
Year 1	\$868.42
Year 2	\$911.84
Year 3	\$957.43
Year 4	\$1,005.31
A.11.c. Pre-Coding	
A.11.c. Pre-Coding Setup (includes website setup & customization, support documentation and training)	Per Assessment/Year
Year 1	\$3,964.91
Year 2	\$2,677.19
Year 3	\$2,811.05
Year 4	\$2,951.61
A.11.c Pre-coding Support & maintenance (includes data uploads, pre-coding and reviews)	Per Assessment/Admin
Year 1	\$868.42
Year 2	\$911.84
Year 3	\$957.43
Year 4	\$1,005.31
A.11.c. Pre-code response documents-multi-page	Per Document
Year 1	\$2.00
Year 2	\$3.00
Year 3	\$0.15
Year 4	\$1.50
A.11.c. Pre-code response documents - single sheet	Per Document
Year 1	\$2.00
Year 2	\$3.00
Year 3	\$1.50
Year 4	\$1.50
A.12. Processing Activities	

A.12. Assessment Processing (includes scanning, editing, SR scoring, and reporting)	Per Content Area/ Assessment/Admin
Year 1	\$25,000.00
Year 2	\$20,000.00
Year 3	\$20,000.00
Year 4	\$15,000.00
A.13 Scoring Activities	
A.13.e(4) Range Finding	Per Meeting
Year 1	\$11,330.80
Year 2	\$11,897.34
Year 3	\$12,492.21
Year 4	\$13,116.82
A.13.e (8) CRA Scoring w/ 2 hand scorers	Per Test
Year 1	\$11.75
Year 2	\$12.50
Year 3	\$12.50
Year 4	\$12.50
A.13.e (8) CRA Scoring w/ 2 hand scorers for non-ELA and U.S. History	Per Test
Year 1	0
Year 2	0
Year 3	\$5.00
Year 4	\$5.00
A.14.e (7) CRA Scoring w/ 1 hand scorer & tech	Per Test
Year 1	\$0.00
Year 2	\$0.00
Year 3	\$2.25
Year 4	\$2.25
A.14.e(7) CRA Scoring w/ tech scoring	Per test
Year 1	\$0.00
Year 2	\$0.00
Year 3	\$0.00
Year 4	\$0.00
A.14.e.(7) Tech Model building	Per Test
Year 1	\$0.00
Year 2	\$0.00
Year 3	\$0.00
Year 4	\$0.00

A.14.e (7) Tech Monitoring	Per Test
Year 1	\$0.00
Year 2	\$0.00
Year 3	\$0.00
Year 4	\$0.00
A.14. Reporting Activities	
A.14.f. Online Reporting Setup (includes report customization)	Per Assessment/Admin
Year 1	\$9,938.60
Year 2	\$5,065.79
Year 3	\$5,319.08
Year 4	\$5,585.03
A.14.f. Online Reporting Support and Maintenance (includes training and posting of all reports)	Per Assessment/Admin
Year 1	\$2,605.26
Year 2	\$2,735.53
Year 3	\$2,872.30
Year 4	\$3,015.92
A.14.j Paper Reports / Labels	
A.14.j Student Reports grade 3-8	Per Student (4 content areas)
Year 1	\$0.53
Year 2	\$0.47
Year 3	\$0.50
Year 4	\$0.53
A.14.j EOC Student Reports	Per Student (ea)
Year 1	\$0.37
Year 2	\$0.33
Year 3	\$0.36
Year 4	\$0.38
A.14.j Student Labels grades 3-8	Per Student
Year 1	\$0.30
Year 2	\$0.31
Year 3	\$0.34
Year 4	\$0.36
A.14.j EOC Student Labels	Per Student
Year 1	\$0.18
Year 2	\$0.19
Year 3	\$0.20
Year 4	\$0.22

A.14.j Comprehensive Data Files (CDF)	1 - ACH, 1 EOC/YR, 1 EOC Fall, Spring - each includes SR & CR and 1 Alt
Year 1	\$8,336.84
Year 2	\$3,809.47
Year 3	\$3,999.95
Year 4	\$4,199.94

*Notice: The amount(s) per compensable increment detailed above shall be contingent upon the State's receipt of an invoice (as required in section C.5. below) for said service(s) within thirty (30) days after the end of the calendar month in which the service(s) were rendered. At the sole discretion of the State, the amount per compensable increment of any service for which the State receives an invoice later than prescribed herein shall be subject to a reduction in amount of up to 100%. In the case of an untimely invoice, before any payment will be considered by the State, the Contractor must submit a written request regarding the untimely invoice, which shall detail the reason the invoice is untimely as well as the Contractor's plan for submitting all future invoices no later than prescribed herein, and it must be signed by an individual empowered to bind the Contractor to this Contract.

22. Contract section D.2. is deleted in its entirety and replaced with the following:

D.2. Communications and Contacts. All instructions, notices, consents, demands, or other communications required or contemplated by this Contract shall be in writing and shall be made by certified, first class mail, return receipt requested and postage prepaid, by overnight courier service with an asset tracking system, or by email or facsimile transmission with recipient confirmation. All communications, regardless of method of transmission, shall be addressed to the respective Party at the appropriate mailing address, facsimile number, or email address as stated below or any other address provided in writing by a Party.

The State:

Heather M. Peltier, Chief Assessment Officer
Tennessee Department of Education
710 James Robertson Parkway
Nashville, TN 37209
heather.peltier@tn.gov
Telephone # (615) 626-0391
FAX # (615) 532-8226

The Contractor:

Primary contact:

Marty Mineck, Vice President, State Solutions
Questar Assessment, Inc.
5550 Upper 147th Street West
Apple Valley, MN 55124
mmineck@questarai.com
Telephone # (319) 800-9032

Secondary contact:

Brad Baumgartner, Chief Operating Officer
Questar Assessment, Inc.
5550 Upper 147th Street West
Apple Valley, MN 55124

bbaumgartner@questarai.com
Telephone # (317) 586-5095

All instructions, notices, consents, demands, or other communications shall be considered effective upon receipt or recipient confirmation as may be required.

23. Contract section D.30.b. is deleted in its entirety and replaced with the following:

- b. this Contract with any attachments or exhibits (excluding the items listed at subsections c. through f., below), which includes Attachment A: Attestation;

24. Contract Attachment B is deleted in its entirety and replaced with the new attachment B attached hereto.

Required Approvals. The State is not bound by this Amendment until it is signed by the contract parties and approved by appropriate officials in accordance with applicable Tennessee laws and regulations (depending upon the specifics of this contract, said officials may include, but are not limited to, the Commissioner of Finance and Administration, the Commissioner of Human Resources, and the Comptroller of the Treasury).

Amendment Effective Date. The revisions set forth herein shall be effective DATE. All other terms and conditions of this Contract not expressly amended herein shall remain in full force and effect.

IN WITNESS WHEREOF,

QUESTAR ASSESSMENT, INC.

SIGNATURE

DATE

PRINTED NAME AND TITLE OF SIGNATORY (above)

TENNESSEE DEPARTMENT OF EDUCATION:

CANDICE MCQUEEN, COMMISSIONER

DATE

ATTACHMENT B

LIQUIDATED DAMAGES

PRODUCT DESCRIPTION	Cost per State work day
A.4 Schedule	
A.4.a. Annual Work Plan	\$25,000.00
A.4.a Annual Work Plan Review	\$25,000.00
A. 5. Operations Management	
A. 5. a-g. Operations Management (includes administrative tasks, continuity activities, management meetings)	\$10,000.00
A.5.h. Technical Support Services	\$50,000.00
A.6. Development Activities	
A.6.d. Test Specifications (includes full item specifications A.6.e)	\$25,000.00
A.6.g. Alignment Study	\$25,000.00
A.6.g. Additional Alignment Studies	\$10,000.00
A.6.f, h-n. SR Test Construction (includes item and form development)	\$25,000.00
A.6.f, h-n.CR Test Construction (includes item and form development)	\$25,000.00
A.6.h(8)xi-xxii Passage/Item Review Meetings	\$10,000.00
A.6.h(8)xxiii Sight Reviews	\$10,000.00
A.7. Psychometric Activities	
A.7.b Equating Study	\$25,000.00
A. 7.b-c & v. Research Studies	\$10,000.00
A.7.u. Standard Setting	\$25,000.00

PRODUCT DESCRIPTION	Cost per State work day
A.7.v. TAC Meetings (4-10 participants) 1-2 days	\$15,000.00
A.7.aa Technical Report	\$50,000.00
A.7.kk. Comparability Study	\$15,000.00
A.8 Assessment Materials	
A.8.b Training Meetings and Materials	\$5,000.00
A.8.c Preparation Materials	
A.8.c.(1) On-line Item Tools	\$15,000.00
A.8.c.(2) Practice test - Development (include electronic version, teacher directions, and 50-75 practice items)	\$15,000.00
A.8.c.(2) Practice Test Book	\$25,000.00
A.8.c.(2) Large Print Practice Test	\$25,000.00
A.8.c.(2) Braille Practice Test	
A.8.c.(2) Braille Practice Test Development (include electronic version & teacher directions)	\$25,000.00
A.8.c.(2) Braille Practice Test Book	\$25,000.00
A.8.c.(2) iii Audio practice test development (master)	\$15,000.00
A.8.c.(2) iii Audio Practice Test CD	\$15,000.00
A.8.d Modified Materials	
A.8.d.(1) Braille Test Development	\$25,000.00
A.8.d.(1) i Braille audio development (master)	\$25,000.00
A.8.d.(1) Braille Test Book	\$25,000.00
A.8.d.(1) i Braille audio CD	\$25,000.00
A.8.d.(2) Large Print Test Book	\$25,000.00
A.8.e. Administrative Materials	

PRODUCT DESCRIPTION	Cost per State work day
A.8.e.(1-2) Online User's Guide	\$30,000.00
A.8.e.(3) Test Administration Manual Development (include web optimized pdf version)	\$25,000.00
A.8.e.(4) Test Administrator/Proctor Scripts (include web optimized pdf version)	\$25,000.00
A.8.e.(5-6) Teacher Header	\$25,000.00
A.8.e.(7) Comprehensive GTI (includes web optimized pdf version)	\$25,000.00
A.8.e.(7) Parent Brochure	\$25,000.00
A.8.f. Assessment Materials	
A.8.f.(1) Online Platform - application, maintenance, customization, updates	\$50,000.00
A.8.f.(2) Student Test Books	
A.8.f.(2) Two content areas	\$25,000.00
A.8.f.(2) One content area	\$25,000.00
A.8.f.(3) Student Response Documents	
A.8.f.(3) Multi-page	\$25,000.00
A.8.f.(3) One Sheet	\$25,000.00
A.9 Assessment Materials Packaging and Distribution	
A.9.b Packaging and Distribution	\$25,000.00
A.9.c. Inventory Management	
A.9.c. Inventory Management Setup (includes website setup & customization, support documentation and training, equipment)	\$25,000.00
A.9.c. Inventory Management Support & maintenance	\$25,000.00
A.10. Technical Requirements	

PRODUCT DESCRIPTION	Cost per State work day
A.10. Technical requirements, any breach of a technical requirement	\$100,000
A.11. Functional Requirements	
A.11.a. Custom programming	\$15,000.00
A.11.a. Website Hosting	\$25,000.00
A.11.c. Enrollment and data provisioning	
A.11.c. Enrollment Setup (includes website setup & customization, support documentation and training)	\$25,000.00
A.11.c. Enrollment Support & maintenance (includes data upload from state/systems)	\$25,000.00
A.11.c. Pre-code response documents-mult-page	\$25,000.00
A.11.c. Pre-code response documents - single sheet	\$25,000.00
A.12. Processing Activities	
A.12. Assessment Processing (includes scanning, editing, SR scoring, and reporting)	\$50,000.00
A.13 Scoring Activities	
A.13.e(4) Range Finding	\$25,000.00
A.13.e 8) CRA Scoring w/ 2 hand scorers	\$50,000.00
A.14. Reporting Activities	
A.14.f. Online Reporting Setup (includes report customization)	\$50,000.00
A.14.f. Online Reporting Support and Maintenance (includes training and posting of all reports)	\$50,000.00
A.14.j Paper Reports / Labels	
A.14.j Student Reports grade 3-8	\$25,000.00
A.14.j EOC Student Reports	\$25,000.00
A.14.j Student Labels grades 3-8	\$25,000.00
A.14.j EOC Student Labels	\$25,000.00

PRODUCT DESCRIPTION	Cost per State work day
A.14.j Comprehensive Data Files (CDF)	\$50,000.00

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