STUDENT ASSESSMENTS AND ASSOCIATED GROWTH MODELS FOR TEACHER AND PRINCIPAL EVALUATION

FORM *C*

PUBLICLY AVAILABLE SERVICES SUMMARY

This form will be posted on the New York State Education Department's Web site and distributed through other means for all applications that are approved in conjunction with this RFQ to allow districts and BOCES to understand proposed offerings in advance of directly contacting Assessment Providers regarding potential further procurements.

Assessment Provider Information	
Name of Assessment Provider:	FastBridge Learning, LLC
Assessment Provider Contact Information:	www.fastbridge.org 612-254-2534 sales@fastbridge.org
Name of Assessment:	FAST aMath
Nature of Assessment:	☒ ASSESSMENT FOR USE WITH STUDENT LEARNING OBJECTIVES WITH A TARGET SETTING MODEL; OR ☐ SUPPLEMENTAL ASSESSMENT WITH AN ASSOCIATED GROWTH MODEL: ☐ GAIN SCORE MODEL ☐ GROWTH-TO-PROFICIENCY MODEL ☐ STUDENT GROWTH PERCENTILES ☐ PROJECTION MODELS ☐ VALUE-ADDED MODELS ☐ OTHER:
What are the grade(s) for which the assessment can be used to generate a 0-20 APPR score?	Grades 1 to 5
What are the subject area(s) for which the assessment can be used to generate a 0-20 APPR score?	Mathematics
What are the technology requirements associated with the assessment?	FAST™ is a web-based, hosted SaaS solution. As such, with no hardware or software to install, implementing FAST is simple. FAST requires no network or computer-based installation. Our cloud-based system is easy to implement and supported with optional automated rostering and SIS integration, nothing to install or maintain, and multi-platform and device support. The infrastructure requirements of New York Schools will be minimal. For optimal performance, schools must have sufficient bandwidth for the aMath Computer-Adaptive Tests. Performance testing has shown that 75Mbps of available bandwidth is optimal if a school district planned to test 500 students simultaneously on aMath. At this range, the average page response is in the 2–5 second range.

Is the assessment available, either for free or through purchase, to other districts or BOCES in New York State?	☒ YES ☐ NO

Please provide an overview of the assessment for districts and BOCES. Please include:

- **A description of the assessment;**
- **A description of how the assessment is administered;**
- **A description of how scores are reported (include links to sample reports as appropriate);**
- **A description of how the Assessment Provider supports implementation of the assessment, including any technical assistance. (3 pages max)**

FAST aMath (Adaptive Math) is a simple, efficient, fully automated computer adaptive measure of broad math and component skills. FAST aMath is designed to identify those students with deficits in math achievement in need of additional instruction and predict performance on state accountability measures. It is individualized for each student, but may be group administered. Items tap a variety of skills including counting and cardinality, operations and algebraic thinking, number and operations in base ten, numbers and operations, measurement and data, and geometry. These assessments adapt and individualize to the skills of each student. Students typically complete the assessments in 20-30 minutes, reducing testing time by up to 50-95% compared to traditional tests. Our extensive research has enabled the aMath test of 30 items to replace a traditional 100-item test, with high accuracy and fully automated administration and scoring of individualized assessments for purposes of universal screening and instructional leveling. It also provides skill-based diagnostic reports of strengths and weaknesses along with progress monitoring and instructional evaluation.

The type of questions and response format is substantially similar to many state-wide assessments (i.e., multiple choice, fill in the blank). There are both auditory and visual stimuli presented for each question. Although the test is individualized for each student, typically developing kindergarten students receive items related to number and quantity identification. Typically developing students in fourth and fifth grades receive items related multi-step problem solving and advanced calculation.

The assessment is highly researched and based the recommendations of the National Math Panel (2008) and National Common Core Standards (2010). The domains of math achievement measured by aMath are directly linked with the CCSS and the six domains listed above are described in more detail below.

Counting & Cardinality (CC)
The CC domain addresses students' basic knowledge of numbers. For example, students are expected to know number names, count to tell the number of objects, and compare numbers. The CC domain serves as a fundamental building block for the development of more complex math skills. For example, students may first be able to count a series of objects, later recognize the count of small groups without explicit counting, and still later, group large numbers of objects into meaningful groups (e.g. by tens) to arrive at a total.

Operations & Algebraic Thinking (OA)
The OA domain extends from kindergarten through fifth grade and deals largely with the representation and solution of basic math facts. In kindergarten, students are expected to begin parsing out the differences in meaning between "addition" and "subtraction." As students progress, they are expected to solve increasingly complex problems that may require addition, subtraction, multiplication, or division. Upon reaching grades four and five, students are expected to be familiar with the concepts of multiples and factors. In addition, students may be asked to interpret numerical expressions or analyze relationships using knowledge of the four operations developed in grades K-3.

Number & Operations in Base Ten (NBT)
The NBT domain extends from kindergarten through fifth grade and includes knowledge of place value and its applications. In kindergarten through second grade, students are expected to gain knowledge of place value and apply it to counting and basic operations involving addition and subtraction of whole numbers. At higher grade levels, students extend this knowledge to interpret the relationships between the digits of a single number. Students are eventually expected to do multi-digit operations involving whole numbers and decimal numbers. For example, students may be asked to find the sum, difference, or product of 2.34 and 10 using their knowledge of place value.

Number & Operations – Fractions (NF)
The NF domain is a part of the standards for students in third through fifth grade. In third grade, fractions are introduced to students as a new set of numbers in addition to whole numbers. Students are expected to understand fractions as partitions and compare fractions by reasoning about their size. Students at this level use math models involving equal parts or partitions to develop their understanding of fractions. For students in fourth grade, the ability to compare fractions is required. Students may also need to convert between decimal numbers and fractions. In fourth and fifth grade, students continue to extend their knowledge on operations of fractions with whole numbers and of fractions with fractions. By the end of fifth grade, students are expected to solve real-world problems with operations including multiplication, division, addition and subtraction.

Measurement & Data (MD)
The MD domain extends from kindergarten through fifth grade and addresses conversion of units as well as the interpretation of data. At kindergarten, students are tested on classifying and comparing objects with measurable attributes. In first and second grades, students develop their ability to work with variables such as time, length, and volume. By fourth grade, students are required to convert various units in a given measurement system. Through all grade levels, students are expected to develop and understanding of data on diagrams. By the end of fifth grade, students may be asked to complete tasks such as creating a line plot of data or using different operations to calculate measurements.

Geometry (G)
The G domain extends from kindergarten through fifth grade and covers knowledge ranging from comparison of shapes to the interpretation of coordinate planes. Through all grade levels, students are expected to build on their ability to classify and create shapes and solids by understanding the attributes of each category. As students reach higher grade levels, they are asked to work with more specific categories and more abstract figures. For example, students may be tested on the differences between an obtuse angle and an acute angle.

As noted, the representation of the CCSS domains differs by grade. That is, one domain may be overrepresented in one grade and underrepresented in another. In some cases, such as the CC domain, standards from a particular domain are only present in one grade.

aMath is often used by teachers to screen all students and estimate annual growth with tri-annual assessments (fall, winter & spring). Benchmark Standards (i.e., “cut scores” or “targets”) are built into the system to assist in determining which students are at-risk for academic failure versus those who are on track to be successful. Students with deficit achievement are quickly identified for additional intervention. The data also identify and inform instructional decisions for on-track and high-performers. aMath is quick to administer, predictive of risk, and provides teachers with data to inform instruction. aMath is administered and scored with browser-based software. It may be administered individually or by group. Students are set-up with earphones and a laptop, desktop, or mobile tablet device. A teacher or other staff person logs into FAST, selects the student(s) name(s), and proctors the assessment. Administration and scoring are fully automated.

Reports are available to evaluate student performance against local norms, mastery criterion, and predictions of risk to meet proficiency standards on state tests. Reports provide a summary of student performance on a scale that spans grades 1 to 5. Student performance is on a scale of 150 to 700 with an average of 400. Benchmark/criterion standards are specified for each grade level, which are used to identify students at risk.

FAST provides information on student proficiency, as well as growth reporting over time. Our easy-to-generate, carefully structured reports are instantly available for teachers. These reports

are instantly applicable to instruction, offering rich information about student strengths, areas needing improvement, and growth trends within and across school years. District Managers, School Managers, and Specialists within the FAST system may run grade-wide reports from the FAST Reports Manager. District Managers also have access to run reports for multiple schools in the district at once. In addition to the standard FAST reporting, FastBridge Learning offers additional ad-hoc and custom reporting capabilities via our "Off-Line Reporting" feature. These data may be exported for use in other systems if desired, and scheduled custom exports may be requested.

FastBridge Learning provides tailored options for training, professional development (PD), and ongoing learning that are designed to be efficient, effective, and engaging. We believe that in order for teachers to provide high quality instruction for their students, we must provide high quality professional development for our participants. We use multiple approaches to facilitate learning, including digital technologies, interaction, hands-on learning, small group activities, Q&A, live modeling, certification, and more to create a learner-centered environment that maximizes engagement and knowledge retention. Training and Professional Development Service Options delivered by FastBridge Learning Consultants:

- Onsite services in single or two-day packages designed specifically to provide guidance, instruction, and assistance to support action planning and implementation delivered in a train-the-trainer model.
- Webinar-style services: "Ask the Expert" consultation/training by-the-hour provides a flexible delivery model with affordable, just-in-time PD when you need it most.

The FAST Knowledge Base also offers extensive online support to users via a searchable database of written articles, screenshots, step-by-step tutorials, archived webinars, and tutorial videos about FAST. The Knowledge Base includes general FAQs, Getting Started Guides and Videos for all user roles in FAST, Archived Webinars, Login Access Guides, Overviews, FAQs, Data Interpretation Guides, and other Resources for each of the FAST measures, resources to support screening and progress monitoring set-up and administration, report guides, Benchmark and Norm information, and tools to support School Managers and District Managers. From the FAST Knowledge Base, users may also submit a request for assistance from our School Support team either via email or using the Knowledge Base's "Live Chat" feature (available during business hours).

Please provide an overview of the student-level growth model or target setting model for SLOs for districts and BOCES, along with how student-level growth scores are aggregated to the create teacher-level scores, and how those teacher-level scores are converted to New York State's 0-20 metric.

The target setting model for Student Learning Objectives(SLOs) is an individual growth target model, which is set by the Local Education Agency (LEA). The LEA sets the individual student growth target that represents one year of learning growth, which will be measured with an end-of-year benchmark screening assessment. The percentage of students who meet or exceed their individual growth target is calculated based on a comparison of beginning to end-of-year assessment data. The total percentage of students meeting or exceeding growth expectations set by the LEA at the beginning of the school year is cross-walked to the NYSED's 0-20 rubric, and this then becomes the educator's HEDI rating. For example (based on 100-point scale), if 91-100% of students meet their individual growth target set by the LEA, the teacher would receive a rating of "Highly Effective." If 75-90% of the students in a teacher's classroom meet or exceed their individual growth target set by the LEA, the teacher would receive a rating of "Effective". If 65-74% of students meet their individual growth target, the teacher would receive a rating of "Developing." And, if 64% or fewer students meeting their individual growth target, the teacher would receive an "Ineffective" rating.

New York State Next Generation Assessment Priorities Please provide detail on how the proposed supplemental assessment l or assessment to be used with SLOs addresses each of the Next Generation Assessment Priorities below.	
Characteristics of Good ELA and Math Assessments (only applicable to ELA and math assessments):	The aMath assessment is consistent with best practices in measuring the New York State Learning Standards in mathematics. Reliability and validity evidence supports the use of aMath for the purpose of measuring student growth across the following domains, which are aligned with NYS standards in mathematics: Counting and Cardinality, Operations and Algebraic Thinking, Number and Operations in Base Ten, Number and Operations, Measurement and Data, and Geometry. aMath item development followed the process and standards presented by Schmeiser and Welch (2006) in the fourth edition of Educational Measurement (Brennan, 2006). Research assistants, teachers from each grade level (1st through 5th), and content experts in the area of math served as both item writers and reviewers. After items were written they were reviewed for feasibility, fairness, construct relevance, and content balance. A stratified procedure was used to recruit a diverse set of item writers from urban, suburban and rural areas. The item writers wrote, reviewed, and edited assessment materials. Item writing for aMath was a multi-year, collaborative, and iterative process. First the literature on item writing guidelines typically used in developing assessments was reviewed. Next, the literature on multiple-choice item writing was reviewed. Once the literature was reviewed, the guidelines were applied to aMath to examine relevance and utility. Extensive guidelines were provided to item writers and the process outlined above was followed. The aMath project uses a research-based skills hierarchy and unified construct of broad math achievement to establish an instructionally relevant assessment. The importance and emphasis on each component skill (domain) varies across children. Each assessment is individualized by the aMath software and built-in assessment algorithms. As a result, the information and precision of measurement is optimized regardless of whether a student functions at, above, or below grade level (i.e., same age and grade peers). The grade labels and content balancing that are proposed in the a-priori model derive from the recommendations of expert panels and are subject to empirical evaluation and refinement.
Assessments Woven Tightly Into the Curriculum:	We believe the best assessments are those that are able to be seamlessly administered in conjunction with regular classroom instruction and in support of the day-to-day academic goals of the teacher. Designed for Multiple Systems of Support (MTSS) and Response to Intervention (RtI), FAST makes program implementation easy and efficient with automated scoring, analysis,

	norming and reporting; customizable screening, benchmarking, instructional recommendations and progress monitoring. Immediate, on-demand reporting within FAST provides actionable data specifically designed to guide instruction and remediation. Our assessments help teachers collect data that answer their critical questions about student skills, instructional needs, and growth at the student, group, class, grade, school, and district levels. A variety of reports are provided to inform instruction. FAST assessments yield reports with scores compared to color-coded norms (class, school, district, national) and benchmarks (high risk, some risk, low risk that predict state test performance). Norms and benchmarks are available for both level of achievement and rate of growth. Rate of growth norms are provided for aggregated (all students) and disaggregated (high, typical, low achieving). These results are presented in automated reports. Reports help evaluate district, school, grade, and teacher level success.
Performance Assessment:	Reliability and validity evidence supports the use of aMath for the purpose of measuring student growth across the following domains, which are aligned with NYS standards in mathematics: Counting and Cardinality, Operations and Algebraic Thinking, Number and Operations in Base Ten, Number and Operations, Measurement and Data, and Geometry. The FAST assessments are evidence-based. Numerous studies were completed with diverse samples of students across many geographic locations and LEAs (e.g., NY, GA, MN, IA, and WI). Consistent with the definitions of "evidence-based," there are many large, multi-site studies with student samples from the populations and settings of interest (i.e., K–12 students). The samples size for almost all studies well-exceeded the requirement of 50 students per condition (e.g., assessment, grade, LEA, instructional condition). On aggregate, more than 15,000 students participated in well-controlled psychometric research. In addition, norms were developed from samples of approximately 8,000 students per grade (K to 8th) per assessment, which aggregates to 72,000 student participants. Consistent with the requirements for evidence, the psychometric qualities for reliability and validity were statistically significant, and the various assessments are meaningful and statistically robust indicators of relevant outcomes, such as state tests and future performance in school. FastBridge Learning uses standard setting processes to summarize student performance. Standards may be used to inform goal setting, identify instructional level, and evaluate the accuracy of student performance. The

	FastBridge Learning software provides various resources to assist administrators with test result interpretations. For example, a Visual Conventions drop down menu is available to facilitate interpretation of screening and progress monitoring group and individual reports. Percentiles are calculated for local school norms unless otherwise indicated. Local school norms compare individual student performances to their same grade and school peers. Methods of notation are also included to provide information regarding those students predicted to be at risk. Exclamation marks (! and !!) indicate the level of risk based on national norms. One exclamation mark refers to some risk, whereas two exclamation marks refer to high risk of reading difficulties or not meeting statewide assessments benchmarks, based on the score. Interpreting FastBridge assessment scores involves a basic understanding of the various scores provided in the FastBridge Learning software and helps to guide instructional and intervention development. FastBridge Learning offers individual, class, and grade level reports for screening, and individual reports for progress monitoring. Additionally, online training modules include sections on administering the assessments, interpreting results, screen casts, and videos. Results should always be interpreted carefully considering reliability and validity of the score, which is influenced by the quality of standardized administration and scoring. It important to consider the intended purpose of the assessment, its content, the stability of performance over time, scoring procedures, testing situations, or the examinee. The FastBridge Learning system automates analysis, scoring, calculations, reporting and data aggregation. It also facilitates scaling and equating across screening and progress monitoring occasions.
Efficient Time-Saving Assessments:	Students typically complete the aMath assessments in 20-30 minutes, reducing testing time by up to 50-95% compared to traditional tests. Our extensive research has enabled the aMath test of 30 items to replace a traditional 100-item test, with high accuracy and actionable results.
Technology:	aMath can be group administered in a computer lab setting, or a student can complete an administration individually at a computer terminal set up in a classroom, or with the use of a tablet device. aMath test sessions typically last 15 to 30 minutes, depending on grade, student ability, and other factors. The test terminates on its own informing students they have completed all items. aMath administrations are typically completed following 30 items.
Degree to which the growth model must differentiate across New York State's four levels of teacher effectiveness (only	

applicable to supplemental assessments):	

STUDENT ASSESSMENTS FOR TEACHER AND PRINCIPAL EVALUATION

FORM H

APPLICANT CERTIFICATION FORM –ASSESSMENTS FOR USE WITH STUDENT LEARNING OBJECTIVES

Please read each of the items below and check the corresponding box to ensure the fulfillment of the technical criteria.

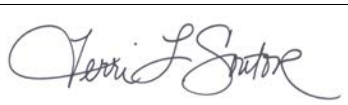
PLEASE SUBMIT ONE "FORM H" FOR EACH APPLICANT. CO-APPLICANTS SHOULD SUBMIT SEPARATE FORMS.

The Applicant makes the following assurances:

Assurance	Check each box:
The assessment is rigorous, meaning that it is aligned to the New York State learning standards or, in instances where there are no such learning standards that apply to a subject/grade level, alignment to research-based learning standards.	☒
To the extent practicable, the assessment must be valid and reliable as defined by the Standards of Educational and Psychological Testing.	☒
The assessment can be used to measure one year's expected growth for individual students.	☒
For K-2 assessments, the assessment is not a "Traditional Standardized Assessment" as defined in Section 1.3 of this RFQ.	☒
For assessments previously used under Education Law §3012-c, the assessment results in differentiated student-level performance. If the assessment has not produced differentiated results in prior school years, the applicant assures that the lack of differentiation is justified by equivalently consistent student results based on other measures of student achievement.	☒
For assessments not previously used in teacher/principal evaluation, the applicant has a plan for collecting evidence of differentiated student results such that the evidence will be available by the end of each school year.	☒
At the end of each school year, the applicant will collect evidence demonstrating that the assessment has produced differentiated student-level results and will provide such evidence to the Department upon request.[3]	☒

[3] Please note, pursuant to Section 2.3 of this RFQ, an assessment may be removed from the approved list if such assessment does not comply with one or more of the criteria for approval set forth in this RFQ

To be completed by the Copyright Owner/Assessment Representative of the assessment being proposed and, where necessary, the co-applicant LEA:

FastBridge Learning, LLC 1. Name of Organization (PLEASE PRINT/TYPE)	 4. Signature of Authorized Representative (PLEASE USE **BLUE** INK)
Terri Lynn Soutor 2. Name of Authorized Representative (PLEASE PRINT/TYPE)	January 8, 2017 5. Date Signed
Chief Executive Officer 3. Title of Authorized Representative (PLEASE PRINT/TYPE)	

1. Name of LEA (PLEASE PRINT/TYPE)	4. Signature of School Representative (PLEASE USE **BLUE** INK)
2. School Representative's Name (PLEASE PRINT/TYPE)	5. Date Signed
3. Title of School Representative (PLEASE PRINT/TYPE)	