CONTRACT AMENDMENT NUMBER 1

I.   PARTIES

This Amendment to the above-referenced Original Contract (hereinafter called the Contract) is entered into by and between NCS Pearson, Inc. 2510 North Dodge Street, Iowa City, Iowa 52245(hereinafter called Contractor), and the State of Colorado (hereinafter called the State) acting by and through the Colorado Department of Education (hereinafter called CDE), 201 East Colfax, Denver, Colorado 80203.

II.   EFFECTIVE DATE AND ENFORCEABILITY

This Amendment shall not be effective or enforceable until it is approved and signed by the Colorado State Controller or designee (hereinafter called the Effective Date). The State shall not be liable to pay or reimburse Contractor for any performance hereunder including, but not limited to, costs or expenses incurred, or be bound by any provision hereof prior to the Effective Date.

III.   FACTUAL RECITALS

The Parties entered into the Contract to obtain the required services and deliverables for the development, administration, scoring and reporting of science and social studies for the Colorado summative and alternate assessments. The purpose of this amendment is to revise the statement of work and add funds for the assessments.

IV.   CONSIDERATION-COLORADO SPECIAL PROVISIONS

The Parties acknowledge that the mutual promises and covenants contained herein and other good and valuable consideration are sufficient and adequate to support this Amendment. The Parties agree to replacing the Colorado Special Provisions with the most recent version (if such have been updated since the Contract and any modification thereto were effective) as part consideration for this Amendment.

V.   LIMITS OF EFFECT

This Amendment is incorporated by reference into the Contract, and the Contract and all prior amendments thereto, if any, remain in full force and effect except as specifically modified herein.

VI.   MODIFICATIONS

The Amendment and all prior amendments thereto, if any, are modified as follows:

A.   Paragraph VI.A. shall be amended by deleting the original Exhibits A through F and replacing them with Exhibits A through F attached hereto and incorporated herein by reference.

B.   Paragraph VII.A. shall be amended by increasing the maximum amount payable under this Contract to Contractor by the State in State Fiscal Year 2014 by $7,209,948, as determined by the State from available funds.

VII.   START DATE

This Amendment shall take effect on the later of its Effective Date or December 15, 2013.

VIII.   ORDER OF PRECEDENCE

Except for the Special Provisions, in the event of any conflict, inconsistency, variance, or contradiction between the provisions of this Amendment and any of the provisions of the Contract, the provisions of this Amendment shall in all respects supersede, govern, and control. The most recent version of the Special Provisions incorporated into the Contract or any amendment shall always control other provisions in the Contract or any amendments.

IX.   AVAILABLE FUNDS

Financial obligations of the state payable after the current fiscal year are contingent upon funds for that purpose being appropriated, budgeted, or otherwise made available.

THE PARTIES HERETO HAVE EXECUTED THIS AMENDMENT

Persons signing for Contractor hereby swear and affirm that they are authorized to act on Contractor's behalf and acknowledge that the State is relying on their representations to that effect.

CONTRACTOR	STATE OF COLORADO
NCS Pearson, Inc.	John W. Hickenlooper, GOVERNOR

Colorado Department of Education
Robert Hammond, Commissioner

By: *Walter Sherwood*
Name of Authorized Individual

Title: *President, State Services*
Official title of Authorized Individual

By: Robert Hammond, Commissioner

Date: *12-18-13*

*Signature

ALL CONTRACTS REQUIRE APPROVAL by the STATE CONTROLLER

CRS §24-30-202 requires the State Controller to approve all State Contracts. This Contract is not valid until signed and dated below by the State Controller or delegate. Contractor is not authorized to begin performance until such time. If Contractor begins performing prior thereto, the State of Colorado is not obligated to pay Contractor for such performance or for any goods and/or services provided hereunder.

STATE CONTROLLER

Robert Jaros, CPA, MBA, JD

By: _____
Dave Grier, CDE Controller

Date: *12·23-13*

EXHIBIT A: Scope of Work

A. Summative Assessment

A.1. General Requirements

Educator Meetings. For all meetings held with Colorado educators, the Contractor is responsible for all costs. This includes all expenses for Americans with Disabilities Act compliant meeting sites, including sign language interpreters and large print as needed; Audio/Visual equipment; internet connections; beverages; snacks; and for all day meetings, lunches. If overnight stay is required, hotel rooms will be billed directly to the Contractor. Each educator receives a stipend or the district is reimbursed for the cost of hiring a substitute at the district's rate during the educator's absence. In addition, educators are reimbursed for travel expenses (mileage, tolls, etc.) and meals during overnight stays. The State of Colorado periodically develops a chart for reimbursement rates. The Contractor shall reimburse attendees based on the state reimbursement rates current at the time of the meetings. The table below presents expenditures for reimbursement.

Educator Meeting Reimbursement

	Description
Stipend or Substitute Reimbursement	$120 stipend if a non-work day for the educator **OR** reimbursement of district for hiring a substitute at the district's rate
Meal Expenses	The per diem rate will be set at the current state (CO) rate at the time of the event. It is only granted to participants who come from out of the local area and who will remain overnight in a hotel provided by the Contractor. See below for more information.
Mileage	Mileage rates will be set at the current state (CO) rate at the time of the event See below for more information.
Lodging	Lodging shall only be provided for participants who travel more than 35 miles in one direction to attend the event. Government rates will be applied. See below for more information.
Airfare/Rental Cars/Cab Fares	Airfare, rental cars, or cab fare shall be provided for participants for whom these means of travel would be less expense than if they drove.

NOTE: For current Colorado rates, see http://www.colorado.gov/cs/Satellite/DPA-DCS/PA/1201542229293

The Contractor is responsible for recruiting educators resulting in representative committees for all educator meetings.

A.1.1. Professional Standards/Best Practices. The Contractor shall develop, under this Contract, materials, practices and procedures developed under this Contract for the Colorado summative assessments that are consistent with relevant professional standards such as those contained in the Standards for Educational and Psychological Testing published by the American Education Research Association (1999 or most current version), and the

various guidance and checklist documents published by the Council of Chief State School Officers, such as the Quality Control Checklist for Item Development and Test Form Construction, particularly in terms of privacy, reliability, validity, opportunity to learn, accommodations, scoring, reporting, and documentation. If the materials, practices, and/or procedures are not consistent with such professional standards, Contractor will inform CDE of the deviations from best practices and/or professional standards as described below.

The Contractor shall inform CDE when implementation practices or policies are not consistent with the best educational research and practice standards. The Contractor shall be responsible for clearly communicating the risks of proceeding outside of conclusions of the best educational research and practice standards. If CDE elects to proceed, the Contractor shall work with CDE to design and implement appropriate mitigation strategies and, to the extent possible, identify associated risk.

A.1.2. <u>State and Federal Requirements</u>. The Contractor shall develop materials, processes, and procedures under this Contract that are consistent with or meet relevant State and Federal legal requirements, including requirements under the Elementary and Secondary Education Act (ESEA) and peer review, as well as the Individuals with Disabilities Education Act (IDEA). Throughout the life of the Contract, and any extensions, the Contractor shall communicate to the State when it concludes that the program or some component thereof is no longer meeting State and Federal requirements and shall provide corrective options to the State for consideration.

A.1.3. <u>Communication</u>. The Contractor shall assist CDE in explaining to the media, the public, stakeholders, the court, and/or other applicable entities why the tests are valid and reliable assessments that are appropriate for their intended purpose. The Contractor shall collaborate with CDE to develop external communications materials for the Colorado student assessments to promote understanding and acceptance of the new assessments.

These external communications materials may include, but are not limited to, interpretive guides which will accurately communicate information in clear language for parents, teachers and other stakeholders, related to cut scores, proficiency levels and descriptors and scale score, including how they work, why they are important, and how they can be properly interpreted. The interpretive guide will show educators how to use test results to support instructional plans.

The Contractor shall use brochures, PearsonAccess™, group training sessions, face-to-face meetings, or other appropriate formats to make assessment results available and understandable to all stakeholders. This includes helping CDE provide information to the media and to technical advisory committee members, or similar groups, for the purposes of accountability and public release of testing information.

A.1.4. <u>Cooperation with Quality Control Contractor and CDE Staff</u>. CDE intends to contract separately with a third-party quality control contractor for all of its assessments. The quality control contractor will review the Contractor's work, meet with the Contractor's staff, and conduct on-site visits at all of CDE's contractor's facilities to assure CDE that 1) the Contractor meets required schedules and quality control requirements and performs services in accordance with contractual requirements; and 2) file exchanges are

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properly coordinated. While working within its corporate and/or contractual guidelines for maintaining security of its facilities, its other clients and confidentiality of student information and data, the Contractor will cooperate with the quality control contractor and CDE staff to provide access to relevant facilities, personnel, and information regarding services provided hereunder. To the extent that quality control contractor will be provided access to Contractor's confidential or trade secret information, an appropriate non-disclosure agreement will be completed.

A.1.5. <u>Interaction with Verification Contractor</u>. CDE may contract separately with a third-party verification contractor on an on-going or periodic basis. While working within its corporate and/or contractual guidelines for maintaining security of its facilities, its other clients and confidentiality of student information and data, the Contractor will share information regarding item parameters; data files (including scan files and command files); and any other information needed to verify the reliability, validity, and quality of the Colorado assessment data and system. To the extent that verification contractor will be provided access to Contractor's confidential or trade secret information, an appropriate non-disclosure agreement will be completed.

A.1.6. <u>Security</u>. The Contractor shall follow the federal Family Educational Rights and Privacy Act (FERPA), state, and industry standard security policies, including the provision of confidentiality agreements for all Contractor staff, subcontractors and educators participating in any aspect of this project.

Any breach of security that occurs through the negligence or inaction of the Contractor, such as, but not limited to, failure to adhere to the Contractor's security protocols or allowing raters to remove secure materials from Item Writing Meetings, Item Review Meetings, Data Review Meetings, Anchor Paper Selection, Validation Meetings, or the Scoring Center, will be considered a default on the terms of this Contract.

The Contractor will be required to sign the FERPA Confidentiality Agreement.

Commitment to Stringent Security

The Contractor's Global Information Security and Technology policy shall be implemented by the Contractor's business unit leaders in collaboration with the Director of the Data Security and Business Continuity (DSBC) team. The DSBC shall implement policy and verify compliance through appointed data security/privacy officers located in all of the Contractor's facilities. Specific focus areas include policy guidance, security procedure training, access and transmission controls, audit activities, and resolution of security issues.

Established and Secure Facilities

All of the Contractor's facilities shall be closed to the general public. Reception areas shall be staffed, and access beyond the reception area shall be restricted, as it shall be with other building entrances. Guards shall be posted at other key entrances where security officers monitor building access directly and via a closed circuit television system. Building access shall be controlled by a proximity card access system. Employees and contractors shall be issued magnetized, photo ID badges after signing a statement accepting responsibility for its proper use. While in the Contractor's facilities,

personnel shall be required to wear the security badge in unobstructed view at all times. Visitors to the Contractor's facilities must be approved by a manager, escorted by the Contractor's staff, and wear date-specific badges.

Information about Security Awareness

The Contractor shall continue its Security Awareness Program, an ongoing effort that provides guidance to every employee so they understand company security policies, their individual responsibilities for compliance, and how their behaviors affect The Contractor's ability to protect systems and data. These efforts are built on the principles of confidentiality, integrity, and availability. Security awareness begins immediately with new hire orientation, covering acceptable use of the Contractor's systems, fundamental best practices such as creating strong passwords, proper use of email and Internet access, and responsibilities in reporting security risks. The Contractor's employees shall be required to complete a web-based training module within 30 days of hire.

Specific online courses covering Payment Card Industries (PCI) compliance and protecting personally identifiable information (PII) have also been developed. The Contractor's awareness training shall also include an annual refresher course that includes components on these topics. Contractor security policies, security training, newsletters, and printed content shall be available on the Security Department intranet site. It provides a central repository for security content and efforts and is available to everyone in the company. Links to this site are incorporated in most of the Contractor's other business specific Intranet sites.

Employee Handling of Test Materials

The Contractor's test-development methodologies prevent the listing all of the employees who will develop and process Colorado summative materials; however, the Contractor stipulates that only those employees explicitly assigned to the project handle testing materials, and that these employees will be required to complete a nondisclosure/security form.

Confidentiality Agreements

During item development and item review, range finding and anchor validations, as well as standard setting, the Contractor will have all participants sign a confidentiality and nondisclosure agreement. The Contractor will communicate security protocols to all participants. Participants will not be allowed to remove material from the meeting room during any development or review sessions nor will they be allowed to use personal computers, cell phones, or other communication devices within the meeting environment.

Secure FTP Site for File Transfers

The Contractor will develop and maintain a secure file transfer protocol (SFTP) site for the duration of the Contract and any future amendments. This site will be fully-encrypted and allow for secure transfer of documents between the Contractor and CDE, and any third party vendors. The Contractor will not utilize email or fax for transmission of secure materials or information.

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User IDs and Passwords

The Contractor's security module will provide administrative user authentication and authorization services. CDE will be provided control of administrative security features, including: persons allowed to access the system; what level of the system (state, system, school) each user can access (customized to match the naming convention for levels used by CDE); and which administrative functions (enrollments, student data management, order tracking, viewing reports, etc.) each user is permitted to access.

Secure Materials Assembly

To maintain test booklet security, the Contractor will perform the pre-packaging and assembly processes in accordance with CDE requirements and its standard security procedures. Only designated, authorized persons will have access to test materials before and after their scheduled use. All security processes described in the following sections work in concert with Oracle's system inventory controls to produce accurate packing results and inventory traceability. The Contractor will check materials to verify that they have been accurately printed and collated, wrap test booklets into sub-assembly components of a predetermined number of documents and identify them using unique package barcode identifications, and perform a quality check during packaging to verify that the item counts listed on the packing lists correspond with the actual test booklets being packaged. At the packing line, scanners will prompt the packing personnel for which item to scan, in the order in which it must be packed. The Contractor's packaging and distribution system will use custom technology to verify packaging and distribution accuracy through barcode scanning of individual testing materials to their specific shipping container.

Secure Delivery of Test Materials

The Contractor's plan for the distribution and return of materials will focus on maintaining test security, providing accurate handling of all test assessment materials, and delivering these materials to the participating districts in a timely manner. The Contractor's experienced warehousing and transportation departments will maintain the quality and security of material distribution and return materials by using such methods as sealed trailers and hiring reputable carriers able to quickly trace shipments.

Accurate Handling and Timely Delivery

To maintain test security, accurate handling, and timely delivery, the Contractor will create a transportation file consisting of requested quantities of each material type (secure or non-secure) along with calculated overages for each participating school within each district. The Contractor will identify appropriate shipping modes based on shipment size and destination. The Contractor will verify shipping addresses for validity according to carrier files.

Materials will ship directly to the district test coordinators responsible for distributing testing materials to the schools, arriving at least two weeks prior to testing. The Contractor will also use its distribution system's tracking capabilities to provide precise status information and immediate opportunities for corrective action. As returned secure

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materials are returned, the Contractor will compare the barcodes of the documents sent to a district to those returned from a given location. The Contractor will provide regular updates to CDE on the status of any unreturned secure materials. The Contractor will generate and deliver a report of any unresolved missing materials to CDE after the scoring window has closed, and after the Contractor has made every effort to locate any missing materials.

Inventory Security

The Contractor will use its automated material inventory system, located within secure warehouse facilities, as the primary security system for all test materials following development (test booklets, test sections, and Supported Performance Task manipulatives). The inventory system will provide an accurate control process that supports the controlled shipment and return of test materials.

Secure Destruction of Materials

The Contractor will provide for the secure destruction of all materials used during test development, committee meetings, and field testing. Annually, the Contractor will provide secure destruction of secure unused test materials six (6) months after the end of the test window, with written permission from CDE. Additionally, the Contractor will provide secure destruction of used test materials twelve (12) months after the test administration window closes, with written permission from CDE.

Solid Security for Colorado

The Contractor will follow stringent procedures in the event of any major data security breach. The Contractor will respond quickly to any suspected breach. Actions the business must take promptly after an actual or suspected breach include the following to contain the breach and investigate the cause:

Determine timing requirements:

- Promptly record all information relevant to the breach, including the cause and effect of the incident and determine whether other systems are at serious risk of future breach.
- Engage specialized consultants to capture relevant information and perform forensic analysis if necessary.
- Follow prescribed legal time limits for notification of persons whose data was breached, if applicable.

Information to be collected promptly:

- The date, time, duration and location of the breach.
- How the breach was discovered, by whom and any known details about it.
- Information on the compromised data, including: a list of affected individuals by category, data fields, the number of records affected and which, if any, data were encrypted.

Analyze legal implications of the breach:

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- Analyze the relevant business contracts for notification and other obligations, breach notification requirements and pertinent indemnification agreements.
- Identify the countries potentially involved with reference to the location of persons and systems affected by the breach and statutes and regulations potentially triggered or violated by the breach.
- Contact local or federal law enforcement agencies, where appropriate.

Working in Concert with CDE

The Contractor's program manager will work with CDE to determine final test administration procedures, including those related to security and confidentiality throughout administration. These will then be included in test manuals and incorporated into test coordinator and administrator training. In addition, a detailed plan for handling general testing irregularities will be developed with CDE that identifies potential types of irregularities, reporting and communications plans, and immediate actions to resolve or mitigate the situation.

A.1.7. <u>Travel</u>. Contractor will be required to travel to various statewide locations to meet project requirements/training.

All anticipated travel expenses are included in the Contract price. The total price quoted for this project includes any travel, lodging or per diem costs to be incurred by the Contractor's personnel to provide services requested. NO ADDITIONAL COSTS WILL BE REIMBURSED.

A.1.8. <u>Subcontractor Requirements</u>. CDE is allowing subcontracting to occur in the scope of work. CDE will allow subcontracting only under the following circumstances:

- All subcontractors must have primary offices and complete the work within the continental United States.
- CDE reserves the right to reject any subcontractors if it so chooses. Approval of a subcontractor may be rescinded throughout the life of the contract upon 30 day notice from CDE. Mutually agreed upon transition, mitigation and contingency plans will be developed and implemented.

A.1.9. <u>CDE Sign Off</u>. All procedures followed in the development, production, administration, scanning, scoring and reporting of the Colorado summative assessments shall be made available for review by CDE, if requested, and, as determined by CDE, may be subject to CDE approval.

A.2. Corporate Capacity and Personnel

Throughout this document, the term Contractor(s) is assumed to include subcontractors where appropriate and applicable.

If the Contractor has discovered fault with a subcontractor that may impact a CDE deliverable, the Contractor has the obligation to inform CDE immediately. Appropriate steps must be taken by either the subcontractor or the Contractor to correct the problem prior to that problem resulting in substandard performance or non-compliance. The Contractor shall remain responsible for the performance of its subcontractors.

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A.2.1.   Organizational Structure. Organizational charts including identification of Executive and Key Personnel, for the Contractor as a whole and for the CDE project team specifically, including subcontractors where applicable are provided in Attachment 1. The chart indicates lines of authority and communication within and among the Contractor's departments and subcontractors, where appropriate.

The Contractor has indicated that executive team member directly in charge of overseeing the Colorado project shall be Jim Hill, Vice President of State Services with the Assessment and Information group, who will provide executive support for the summative assessments. This executive team member shall be available both during and outside normal business hours to assist with any urgent situations. Changes to the assigned executive team member, except for those resulting from separation of services, require prior written consent by CDE. The replacement shall have qualifications which meet or exceed the original staff member proposed or the staff member holding the position previously and shall be approved by CDE.

A.2.2.   Time Allocation of Key Personnel and Services. Attachment 2 presents the list of key staff with staff member's assigned responsibilities and time allocated to the project. In no case shall an individual be assigned to more than one full-time equivalent position, including work outside of Colorado contracts.

The Contractor shall assign one person to function as the Program Manager for the summative assessments. That person must be responsible for all activities required by the project and will serve as the main contact person between the Contractor and CDE. The Program Manager shall have the authority to make decisions and commitments on behalf of the Contractor, subject to CDE approval.

The Contractor's Technology Consultant shall be responsible for a number of tasks, including but not limited to, assisting CDE and the districts with the transition to online assessment; and assisting CDE and district assessment coordinators with the use of Contractor websites and functionality. Ideally this person will be located in the Denver area. At a minimum, this person will be available to be on-site within 24 hours at the request of CDE. Outside of the installation and testing window, this person's availability may be more flexible; however, during the actual installation and testing window, this person must be immediately available with little to no notice.

CDE reserves the right to interview and approve all key staff including subcontractor staff. Throughout the life of this Contract, and any extensions, changes to the assigned program manager, program coordinator, lead psychometrician, content development lead, content- specific area lead, special populations consultant, and technology consultant, except for those resulting from separation of services, shall require prior written consent by CDE. In the event that CDE requests removal of specific Contractor personnel, the Contractor shall provide acceptable replacement(s) with no impact to the project. Replacement(s) shall have qualifications which meet or exceed the original staff member proposed or the staff member holding the position previously and shall be approved by CDE.

All personnel who will work on-site at CDE or school sites may be required to be pre-approved for site access via a criminal background check paid for by the Contractor.

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A.2.3. <u>Staff Qualifications and Experience</u>. CDE requires that the Contractor's psychometric team will not only execute routine functions, but will provide expertise to guide the psychometric decisions that will need to be made and re-evaluated as the program evolves. The team shall provide psychometric options with strengths and challenges and its recommendations along with rationale. The team shall include Jon Twing, who has extensive experience and psychometric knowledge, as well as the decision-making authority to quickly address and remedy unexpected challenges.

For all meetings involving educators, facilitators must be familiar with best practices, state and federal laws, procedures, and regulations concerning assessment. Facilitators must also be familiar with academic instruction of students and the educational and assessment landscape. Facilitators must be able to clearly articulate spoken English and create easily understood written materials and visual training aids. Facilitators must have demonstrated successful experience in leading large-group trainings including webinars and meetings as fit their responsibilities. CDE reserves the right not to accept any training and meetings facilitators identified if it so chooses.

A.3. Program Management

A.3.1. <u>Key Activities and Transfer Dates</u>.

A.3.1.a <u>Schedule of Activities</u>.

The Contractor shall adhere to the schedule of key activities included in Exhibit B, Summative and Alternate Assessment Schedule, related to the field and key transfer dates between the Contractor and CDE related to development, production, shipping and receipt, administration (of paper-based and online assessments), scanning, scoring (human and artificial intelligence), data processing, reporting and psychometric activities. The Contractor shall adhere to the mutually agreed upon detailed schedule that outlines the tasks and durations for each year of the Contract. The deliverables presented in Exhibit C, Liquidated Damages Dates, shall be subject to liquidated damages as set forth in Paragraph XXI.S and Exhibit C of the Contract.

A.3.1.b <u>Project Schedule</u>.

The Contractor shall follow the baselined project schedule presented to CDE at the beginning of each development cycle that identifies the tasks, subtasks, beginning date, end date, party/functional group responsible for each step in the process, dependencies, detailed hierarchical task descriptions, critical milestone designations and early trigger and milestone identification. The schedules shall be integrated, regularly reviewed, updated, and made available to project stakeholders in a clear and understandable format. The overall schedule shall be incorporated into the comprehensive project management plan. Management of the master schedule shall include identifying and communicating tasks and deliverables, tracking and communicating progress, evaluating the status and availability of resources, and identifying project and program managers, resource managers, team members, and executives.

The Contractor's project schedules will be developed with Microsoft Project® software, according to a clearly defined and highly integrated process. CDE schedules shall be carefully monitored by Contractor's program team to verify that resources will be available when they are needed. Assessment projects shall be run according to schedule. The Contractor shall use its standard, comprehensive work breakdown structure (WBS) as the basis for every assessment schedule. The WBS is extensive and detailed, featuring every common element of work the Contractor and CDE perform to fulfill the requirements of an assessment projects. The WBS shall be carefully managed throughout the project to keep track of schedule elements. The Contractor's program management staff shall be required to submit weekly updates to the Colorado Student Assessments project manager. Any variations in scheduled start dates or projected task durations shall be seen immediately by the Colorado Student Assessments project manager and appropriate corrective action shall be initiated without delay.

The Contractor and CDE shall jointly monitor the schedule on an ongoing basis. The Contractor shall manage schedule adjustments such that final deliverable dates will be met. If necessary, timelines and schedules may be revised with prior approval by CDE and by an executed Contract amendment for all deliverables subject to liquidated damages. A revision of the Contractor's timeline shall exempt the Contractor from meeting a contractual deadline **only if** (1) the Contractor and CDE mutually agree upon and document through an executed contract amendment an extension of the deadline or (2) the Contractor is able to prove that the deadline was not met due to CDE's failure to meet a contractual deadline resulting in the Contractor's inability to adhere to the schedule for delivery of products and services.

The Contractor shall alert CDE as soon as it believes that a deliverable subject to liquidated damages is at risk of not meeting its delivery date. CDE must be notified whenever the Colorado Contract is included in the Contractor's internal meetings focused on programs at-risk.

A.3.2.   Program Management Communication and Reports.

A.3.2.a.   On-going Communication. The Contractor shall engage in on-going communication with CDE. Telephone calls, telephone conference calls, emails, overnight courier service, facsimile correspondence, and other communication procedures will be at the Contractor's expense. The Contractor shall provide toll-free numbers for telephone communication including conference calls and webinars.

The Contractor shall include CDE in all communications with subcontractor, written or oral, regarding subcontractor risk analysis, mitigation strategies and contingency plans related to the services and deliverables provided under this Contract. In addition, CDE shall be able to participate during all Colorado related reoccurring meetings and formal, non-proprietary trainings between the Contractor and the subcontractors identified in this Contract. With prior notification to the Contractor, CDE reserves the right to contact the

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subcontractor directly regarding subcontractor risk analysis, mitigation strategies and contingency plans inviting the Contractor to participate in these communications.

A.3.2.b. <u>Timeliness of Communication</u>. The program management team shall return calls from CDE staff and respond to email messages within 24 hours. If the program manager is not available to take calls and return messages, CDE shall be notified in advance. In the event that a member of the program management team is not available, the Contractor shall notify CDE as to whom to contact in his or her absence, and shall provide contact information for such individual. The Contractor's program manager shall use multiple means to maintain constant and ongoing communications with CDE: email, cell phones, SFTP sites, faxes, conference calls, WebEx conferences, and other means that support the immediacy or urgency of the communications topic, as well as regularly scheduled communications meetings. The Contractor's program manager shall be responsible for ensuring that the appropriate members of the Contractor's team are available for or participate in such communications. The Contractor's program manager and program team shall maintain records of all meetings, minutes, or summaries, including those with subcontractors, and shall make those available to CDE upon request.

CDE shall participate in meetings and trainings as appropriate or as required. To keep CDE fully informed, the Contractor shall use standard communication (phone and e-mail), direct access to the Contractor's leadership, and online access to calendars and schedules. These methods of communication shall be employed to make decisions and provide information to various CDE constituencies. Executive level issues shall be immediately referred to Mr. Hill.

A.3.2.c <u>Weekly Meetings</u>. At a minimum, the Contractor shall schedule weekly conference calls and reports with CDE at a designated time. Program details shall be discussed, including requirements, the schedule, issues, and work updates. As the need arises, other periodic or ongoing conference calls may be conducted. From each conference call, an updated issue log shall be created noting a discussion summary, action items, information needed for program success, dependencies, and key dates from the schedule. The Contractor shall distribute this report to CDE and throughout its company. This report shall be submitted to CDE within two business days of the conclusion of each meeting.

A.3.2.d <u>Project Meetings</u>. The Contractor shall be responsible for the coordination, support, and expense of regular management meetings with CDE's assessment director(s) and team. For the Contract period running through June 2014, the Contractor shall hold monthly planning or work sessions to confirm that all baseline and start-up details are being closely monitored and on-track. Four (4) of these meetings shall be hosted at the Contractor's facilities and the others shall be held in Denver, CO. The Contractor shall prepare draft agendas for CDE review and approval and shall verify that appropriate members of the Contractor's teams attend in person or are available via electronic meeting technologies.

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Dependent upon contract extension beginning in FY 2015 for each of the remaining fiscal contract periods, through August 30, 2017, the Contractor shall meet with CDE every other month (six (6) times annually), with three (3) of these meetings in Denver and three (3) at the Contractor's facilities. The Contractor shall confirm appropriate attendance by pertinent team members. CDE shall be responsible for the costs for its staff to travel to the Contractor's location.

The Contractor's project management team shall collaborate with CDE to identify topics for each meeting. The Contractor shall provide a draft agenda for each meeting to CDE for review. The Contractor's program manager shall work with CDE to develop general formatting and content guidelines for the meeting agendas.

In addition to the in person meetings, the Contractor shall coordinate management meetings via WebEx or teleconferencing through a toll-free number. The Contractor shall be responsible for providing written documentation for all meetings with special attention given to deliberate decisions, actions required, and personnel needed for follow-up. This documentation shall be submitted to CDE within two days of the conclusion of each meeting.

The Contractor shall organize several additional meetings throughout the year. For all meetings— including, but not limited to management meetings, item reviews, alignment studies, range finding meetings, standard settings, and technical advisory groups—the Contractor shall take minutes and make a record of participants, including institutional affiliation and contact information. The Contractor shall provide all minutes, records, and lists of participants to CDE for review and approval within two working days after each meeting. The following figure shows more details about the Colorado Student Assessments face-to-face meetings. Additional Contractor staff shall be available as necessary.

Colorado Summative Assessments Project Meetings					
	TAC Members	CDE Staff	Pearson Staff	Meetings per Year	Number of Days
Technical Advisory Committee (State TAC)	4	8	3	3	2
Contract Kick off Meeting		6	12	1 total (Upon contract award)	2
Annual Planning Meeting		6	4	1	2
Start-Up Project Meetings		6	4	2	2

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Colorado Summative Assessments Project Meetings					
Planning/work sessions		6	4	12 (Fiscal Years 1-2) Dependent upon contract extension: 6 (Fiscal Years 3, 4, 5)	2
Quarterly Upper Management Project Meetings		4	4	4	1

A.3.2.e. Monthly Reports. The Contractor shall provide a monthly report to CDE. The monthly reports shall address important issues affecting the Colorado Student Assessments and provide the information CDE needs to maintain close oversight. Each report shall include information on items such as the following:

- Unanticipated difficulties and proposed solutions
- Feedback from CDE, districts, and schools
- Discussion of unresolved topics
- Decisions needed from CDE
- Status of tasks in progress as compared to the baseline schedule for the summative assessments
- Anticipation of key decisions and issues affecting those decisions
- Preparations for upcoming tasks/events
- Potential impact of specific actions

The monthly report shall also include a detailed list of invoices submitted for payment and a history of invoices previously submitted. These reports shall be sent monthly to CDE by the third business day of the following month.

A.3.2.f. District Assessment Coordinator (DAC) Academy. The Contractor's program manager and the project manager for the Colorado project shall attend the annual DAC Academy. They will either travel to Denver prior to one of the in-state project meetings, or will remain in Denver following the project meeting to be present.

A.3.2.g. District Assessment Coordinator (DAC) Management Meeting. The Contractor's program manager and the project manager shall attend the two DAC management meetings each year. They will gather input from the DACs regarding any suggestions for changes to administration procedures or practices. Any changes suggested by the DACs will require CDE approval before implementation.

A.3.2.h. Program Improvement Plans. The Contractor shall use feedback garnered from pre-test, mid-assessment, post-test workshops, the program review, educator meetings, and yearly performance evaluations to improve all aspects of the Colorado Student Assessments. Based on feedback from Colorado educators, DACs, and CDE, the Contractor shall identify solutions for improvement via

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post phase review meetings, provide a plan for improvement based on "lessons learned," at each planning meeting allow for time on the agenda to discuss Colorado Student Assessments improvements, identify training needs based on feedback from educators and with guidance from CDE, and collaborate with CDE on technology capabilities.

For each phase of the program including development, production, shipping and receipt, administration (of paper-based and online assessments), scanning, scoring (human and artificial intelligence), data processing, reporting and psychometric activities, the Contractor shall provide a report that addresses the relevant phase by detailing the activities completed and by providing recommendations for improvement for the next assessment cycle. The report shall also detail errors, problems, and/or discrepancies by district and by school. The Contractor shall prepare a comprehensive report detailing the annual assessment cycle and providing recommendations for changes and improvements. This report shall incorporate feedback from a range of Colorado constituents, the Technical Advisory Committee (TAC), and members of the Contractor's project teams, allowing CDE to fully analyze such recommendations before making decisions or adjustments. This report shall be completed within one month of completing the relevant phase. Final approved decisions shall be incorporated into the next year's project plan and communicated to the full project team.

A.3.2.i. Quality Control and Sign-Offs. Reviews and signoffs for all deliverables shall be documented and available to CDE upon request. The quality control plan, which shall be included in the program plan, shall be finalized in conjunction with CDE and will incorporate responsible entities, timelines, staff involved in the quality control procedures at each phase and deliverable of the project and CDE involvement in sign-off and approval at various stages.

A.3.2.j. Invoices. The fiscal year term for Colorado shall begin on July 1 and end on June 30. The Contractor shall submit invoices according to the procedures and requirements set forth by CDE. The Program Management Plan will include invoice dates to reflect that, for each fiscal year, invoices are to be submitted quarterly, plus one final invoice. Invoices shall cover work, services, and deliverables provided during the period. Final invoices for each fiscal year shall be submitted by June 15 and the final invoice for each assessment cycle will be submitted by August 15 of each year.

A.3.3. Transition. The Contractor shall assist CDE with all activities required to transfer all assessment documents and materials created and/or completed for the Colorado program (i.e., CDE owned) during the transition phases. The Contractor's staff shall work with Colorado's current contractor to confirm that all existing Colorado assessment materials are transferred on time and that the materials retain their intended content and formatting. The Contractor shall perform a quality assurance check on materials received from the existing contractor and will notify CDE of any materials not delivered as expected.

The Contractor shall facilitate the efficient transfer of all relevant CDE owned documents and materials under its control, including but not limited to those identified in

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the following list among CDE, the current contractor, the Contractor and CDE's future contractor(s):

- Test development – all critical documents and materials used in the test development process;
- Item and test specifications – all item format details, test map requirements, test blueprints, and technical reports;
- Test books –all paper and electronic test booklets and electronic answer documents from previous test administrations; test maps for each form from the previous year's administration with keys and metadata;
- Passages and artwork – all photocopies of the original passages with source documentation, copies of contracts, original electronic art files and applicable permission information;
- Item bank, item and test statistics – all item-level metadata and previous usage statistics, available test-level statistics, and previous operational and field test usage of each item year and form item position status;
- Program administration – all critical documents and materials used with the test administration process;
- General program documentation – all critical documents and materials used for general program documentation and summary reports;
- Reports – sample copies of all reports provided to districts and schools;
- Manuals/guides – sample copies of all guides and manuals (hard copy and electronic versions) for the operational test administrations, and copies of all electronic materials posted on the state website during the operational test administration;
- Scoring information – all critical documents and materials used in the scoring process;
- Scoring/reporting specifications – all documentation regarding scoring rules, aggregation rules, roll-up algorithms, and tables used to calculate student, school, district, and state results;
- Psychometric and related assessment information required for the program – all critical documents and materials used for psychometric analyses and related procedures;
- Professional development – all critical documents and materials used for professional development;
- Editing Specifications – all documentation that outlines how the state would like answer documents edited during the scanning process;
- Data file specifications – all documentation that outlines layouts for files including master file, pre-id, school/district score data and state-level score data;
- Performance scoring specifications – all training papers, anchor sets, calibration papers, rubrics, and constructed-response scoring rules; previous year's score distributions for each item and historical reader agreement rates;
- Technical and other reports – all electronic copies of technical reports produced by the Contractor and electronic copies of any other reports produced by the Contract that document the validity or reliability of the assessments;
- Project plan – all documents that outline the tasks/deliverables and corresponding schedule for those tasks/deliverables;
- Schedules – all previous project schedules containing dates/durations for the following tasks:
  o Developing items, forms, and materials
  o Enrollment and pre-identification
  o Packaging and distribution
  o Receiving and scanning
  o Scoring and reporting

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- Packaging specifications – all documentation concerning packaging algorithms and shipping points; and
- Print specifications – all spreadsheets detailing print specifications for test booklets, scannables, answer documents, labels, envelopes, and manuals.

The Contractor shall assist CDE with all activities required to transfer all CDE owned assessment documents and materials during the two transition phases. Draft Transition Plans shall include procedures for the transition of documents and materials related to the following:

- Program administration – The Contractor shall facilitate the efficient transfer of all critical documents and materials used with the test administration process between CDE and/or contractors.
- Test development – The Contractor shall facilitate the efficient transfer of all critical documents and materials used in the test development process between CDE and/or contractors.
- Scoring information – The Contractor shall facilitate the efficient transfer of all critical documents and materials used in the scoring process between CDE and/or contractors.
- Psychometric and related assessment information required for the program – The Contractor shall facilitate the efficient transfer of all critical documents and materials used for psychometric analyses and related procedures between CDE and/or contractors.
- General program documentation – The Contractor shall facilitate the efficient transfer of all critical documents and materials used for general program documentation and summary reports between CDE and/or contractors.
- Professional development – The Contractor shall facilitate the efficient transfer of all critical documents and materials used for professional development between CDE and/or contractors.

A.4. Assessment Development

A.4.1. Work Plan. The Contractor shall develop and present a work plan annually for approval by CDE. The Contractor shall adhere to the mutually agreed upon detailed schedule that outlines the tasks and durations for each year of the Contract. The draft schedule is included in Exhibit B. Colorado has determined that this Contract will cover the content areas of Science and Social Studies with the option of later adding the content areas of English Language Arts (Reading and Writing), and Mathematics.

The Contractor and CDE shall collaborate at each major phase in the test development process to produce assessments that meet test specifications and are in line with CDE expectations.

The Contractor shall conduct an internal audit for the summative assessments at least once during the Contract period to review past performance and identify any areas for improvement to facilitate Contractor's production of superior test development results.

A.4.2. Content.

A.4.2.a. Determining Eligible Content. The Contractor shall provide a document of eligible content for the summative assessments. This document shall synthesize the eligible content identified in the Colorado Academic Standards. Should

Colorado proceed with English language arts (reading and writing), this document will also synthesize the eligible content identified in the Colorado Academic Standards with the Common Core State Standards, as well as the guidelines outlined by the two multi-state consortia (i.e., Smarter Balanced Assessment Consortium (SBAC) and Partnership for Assessment of Readiness for College and Careers (PARCC)) most appropriate for Colorado students. The Contractor shall outline which standards are assessable and suggest appropriate item formats for each assessable standard. The Contractor shall be responsible for providing a finalized document for CDE's director of assessment approval.

A.4.2.b. <u>Claims and Reporting Categories</u>. The Contractor shall work with stakeholders to develop clear and meaningful claims about students' knowledge and skills that shall serve as the basis for Colorado's summative assessments. Based on these claims, the Contractor and CDE shall collaborate to determine reporting categories and sub-score categories for each assessed subject. The Contractor shall be responsible for providing a finalized document for CDE's director of assessment approval.

A.4.2.c. <u>Frameworks</u>. The Contractor shall provide draft assessment frameworks. The Contractor shall provide refined frameworks to be reviewed by the field and revised by CDE. These frameworks shall consist of eligible content, scalable reporting categories and item type distribution. The Contractor shall be responsible for providing a finalized document for CDE's director of assessment approval.

It is CDE's intent to assess the breadth and depth of the standards each year to the extent possible given the restrictions of a state assessment.

A.4.2.d. <u>Development of Performance Level Descriptors</u>. The Contractor shall develop draft general and grade level specific Performance Level Descriptors (PLDs) for the summative assessments for CDE review. General descriptors shall demonstrate a progression of increasing knowledge, skills, and abilities appropriate for differentiation between performance levels. Grade level and content specific PLDs shall expand the general PLDs to identify specific knowledge, skills and abilities specific to the content standards appropriate for each performance level. The PLDs shall also inform development of item specifications and future item writing and shall be used in the standards setting process to support the validity and defensibility of the entire assessment system.

The Contractor shall provide refined PLDs according to the following plan:

- Standard Setting will follow the first operational administration of each content area assessment
- The proposed Performance Level Descriptor (PLD) development plan is as follows:
  o Develop draft PLDs for CDE review for the subjects being developed under this contract
  o CDE will review and provide feedback to the Contractor
  o PLD review meeting to be held during Teacher Item and Bias Review Committee Meetings or virtual meetings with Teachers in summer
  o Make updates to PLDs following Teacher Review meeting

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- o Post on the web for district review
- o Finalize PLDs at Standard Setting

The Contractor shall be responsible for providing a finalized document for CDE's director of assessment approval.

Five levels of PLDs should be used, patterned after PARCC for summative and outlined with the following descriptions:

Summative
Level 5: Distinguished Command (tentative)
Level 4: Strong Command (tentative)
Level 3: Moderate Command (tentative)
Level 2: Partial Command (tentative)
Level 1: Minimal Command (tentative)

A.4.2.e. <u>Item Types and Test Blueprints/Specifications</u>. The Contractor shall offer guidance to assist CDE in keeping the summative assessments meaningful for students and to provide an item bank that will support form construction for the years of the Contract period. After developing the test designs, the next step in developing fair, valid, and reliable tests shall be to develop high-quality test blueprints and test specifications targeted to the Colorado Academic Standards.

The Contractor shall work with CDE to revise the test blueprints and test specifications well in advance of the first implementation of the new summative assessment to assess the Colorado Academic Standards. Blueprints and specifications must be finalized and approved so they inform item development, followed by test forms construction. The Contractor's assessment specialists shall collaborate with CDE in the continuation of the process needed to complete the new test blueprints and full test specifications. These final test blueprints and test specifications shall become the guiding documents for the revised assessment program.

Test blueprints shall include the following information, at a minimum:

- The number of items of each item-type, by grade-level, and content area
- The number of items and score points per reporting category, standard, grade level expectation, and, where appropriate, nature of science
- The number of items in each eventual test form (operational and field test slots)
- The required number of items addressing each depth of knowledge level

The Contractor shall deliver the blueprints for each content area and grade level in whatever format best suits CDE, including but not limited to Microsoft Word or Excel spreadsheet formats.

Revised blueprints and test specifications shall include the following item types:

- Single correct response, including selected response and "griddable" items (regular and innovative, interactive technology-enhanced). These items

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should be designed to assess the highest content knowledge and cognitive complexity that can be appropriately measured through these types of items.

- Selected response: typically items that are presented with several answer choices, one of which is correct. Students are asked to select the correct answer. In terms of functionality, this includes drag and drop and hot spot items.
- "Griddable" response: single number or single word/phrase responses which are easily machine-scored without extensive engine training.
- Short constructed response (regular or innovative, interactive technology-enhanced). These are items in which students write a response to a question or a prompt. Student responses consist of 1) one to five sentences, 2) written work in solving problems, 3) drawing or 4) another response that typically can be provided in five minutes or less. These items typically require artificial intelligence or human scoring.
- Extended constructed response (regular or innovative, interactive technology-enhanced). These are items in which students write a response to a question or a prompt. Student responses consist of one to several paragraphs. Student responses typically can take approximately 20 minutes.

Science simulations and social studies performance events will include a variety of item types.

After CDE has approved the blueprints, the Contractor shall provide revised test specifications for review and approval. The Contractor shall provide these test specifications in whatever format CDE finds most useful, such as Microsoft Word documents or an Excel spreadsheets. The test specifications shall include the following, at a minimum:

- The definition of the content of the assessment
- The proposed number of items for the test
- The arrangement of items and components of the test
- The desired psychometric properties of the items
- The arrangement of items and components of the test
- Item usage (such as field test, operational, and anchor)
- The item type
- The content domain
- The number of score points per reporting category
- The number of test sessions and approximate time requirements for each assessment
- The standard, grade level expectation, and evidence outcome, as well as nature of science statement and Next Generation Science Standard as applicable
- Psychometric targets
- New development by item type to compensate for refresh and release rates on forms

A.4.2.f. <u>Design</u>. The Contractor shall work with CDE to create an agreed upon test design. The Contractor's draft test design is below.

	Stand Alone 1 point Selected Response*	Stand Alone 2 point Constructed Response*	Stand Alone 3 point Constructed Response*	Simulations for science Performance Events for social studies	Embedded 1 point Selected Response**	Embedded 2 point Constructed Response**	Embedded 3 point Constructed Response**	Embedded 7 point (2 dimensions) Extended Constructed Response
Science Operational	33 (6 embedded field test)	4 (1 embedded field test)	3 (1 embedded field test)	5 (1 embedded field test)	10 (2 embedded field test)	10 (2 embedded field test)	0	0
Total operational points (80)	33	8	9	6 points each	10	20		
Social Studies (grade 4, 7) Operational	36 (7 embedded field test)	0	7 (2 embedded field test)	2 (1 embedded field test)	6 (4 embedded field test)	0	6 (4 embedded field test)	0
Total operational points (81)	36		21	12 points each	6		18	
Social Studies (high school) Operational	37 (6 embedded field test)	0	7 (2 embedded field test)	2 (1 embedded field test)	7 (4 or 6 embedded field test)	0	3 (0 or 4 embedded field test)	1 (0 or 1 embedded field test)
Total operational points (81)	37		21	11 points for ECR; 12 without ECR	7		9	7
	*20% technology enhanced in Year 1, 25% technology enhanced ongoing. Technology enhanced items are expected to involve enhancement in the prompts, interactions and responses. (Drag-and-drop and hot spot interactions for responses do not satisfy this requirement on their own.) Simulations and performance events should also include TEIs.							

The Contractor shall provide a final design to be reviewed and revised by CDE. The Contractor shall be responsible for providing a finalized document for CDE's director of assessment approval.

A.4.3   <u>Item Development</u>. CDE shall own the items developed under this Contract. In the event that CDE wants to share items with and/or license items to/from other states, the conditions around usage of those items would be controlled by the specific licensing agreement by state(s). The following sections provide detail of the requirements to be followed in the development of the Colorado summative item bank.

   A.4.3.a. <u>Sample Items</u>. In Colorado's FY 2013 and 2014, the Contractor is responsible for providing sample items of each item type to be used on the operational assessment for each grade level and content area being assessed under the contract. CDE will share the sample items provided by the Contractor with the public, so the items must be available for this purpose. Samples that were provided by the Contractor in the response to the request for proposals shall be owned by CDE.

   A.4.3.b. <u>Prototypes and Cognitive Labs</u>. The Contractor shall collaborate and work with CDE to develop a customized Cognitive Lab Protocol (i.e., a script) and related materials for observers, along with the test items, to answer specific research questions on both the usability of the test items and the cognitive processing that the test items elicit and how this matches the intended constructs of the items. The Contractor shall conduct two sets of cognitive labs during the 2013 Field Test administration. The primary purpose of these studies shall be to collect information on students' cognitive processing and how these align with the intended constructs of the model. To accomplish this, four technology enhanced item (TEI), simulation, or performance event tasks each shall be selected for Science and Social Studies and tested across three grade levels (i.e., 4, 7, and high school for Social Studies; and 5, 8, and high school for Science).

   A.4.3.c. <u>Item Specifications and Style Guides</u>. The Contractor shall develop specifications for each type of item and artwork to be created for the summative assessments. The Contractor shall work with CDE to prepare a Colorado Style Guide that will be followed by the Contractor. Both the online and paper-based items shall follow the CDE style guide and reflect the principles of Universal Design. (See A.4.3.d.)

   The Contractor shall work with CDE to create item specifications and style guides for all content areas and item types using existing CDE materials as reference to current style and formatting expectations. These documents shall approach different components of the standards in different ways. The item specifications shall result in items tightly aligned with the Colorado Academic Standards (CAS), which include the entirety of the Common Core State Standards (CCSS). Working alongside CDE, the Contractor shall establish item specifications that include a variety of contexts and applications of the tested skills across each content area and item type. Furthermore, for each content

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area, grade level, and item type, the item specifications shall exhibit a range of cognitive levels and difficulties.

On an annual basis, the Contractor shall work with CDE to review and revise the item and art specifications and style guide for all assessments and content areas to verify that they contain any newly-introduced features or needed clarifications to existing specifications as requested by CDE. The Contractor shall be responsible for providing updated copies of item and art specifications and style guide to CDE for approval. All items, tasks, and passages shall be subjected to a separate quality control check to verify that all materials are Accessible Portable Item Profile (APIP) compliant.

The item specifications will include Colorado's preference to include items that reflect Colorado. The Colorado context must not interfere with the construct being measured or result in preference for certain populations resulting in bias.

A.4.3.d. <u>Universal Design</u>. The Contractor shall create items that will permit students with disabilities and English language learners (ELLs) to fully participate in the assessments and receive valid scores, while minimizing the need for accommodations.

The Contractor shall, at a minimum, incorporate the following steps:

- Train item writers in universal design considerations and student characteristics;
- Avoid construct irrelevant content that may unfairly advantage or disadvantage any student subgroup;
- Consider access issues at the time of item writing (example: items with needed visuals/graphics/animation, determine how students with visual disabilities will access the items);
- Consider the impact of different accommodations on items;
- Minimize construct irrelevant language load:
  o Use everyday words to convey meaning when vocabulary is not part of the tested construct;
  o Establish text that is straight forward and concise;
  o Reduce excessive text length and irrelevant material;
  o Avoid complex sentence structure;
  o Use clear, unambiguous words; and
  o Consider major sign languages and sign systems for students who will need signing as an accommodation;
- Minimize the use of italic typeface;
- Use highly distinguishable symbols on graphics;
- Provide art and illustrations that have clearly distinguishable features;
- Avoid using text on shaded backgrounds;
- Examine items for evidence of disability bias and avoid such items;
- Include disability and language acquisition experts in item reviews;
- Review items in the format they will appear on the operational assessment;
- Field test items in accommodated formats;
- Utilize universally designed "help" features and directions; Incorporate accommodations into the computer-based administration, including accommodations used by students with sensory disabilities (ex. magnifiers, enlarged print, oral descriptions of visuals, and oral and signed presentations as appropriate);

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- Use page-layout designs that are easy to read and follow;
- For items that will not transfer to a paper-based accommodated version, write paper-based items that maximize comparability with the technology-enhanced items (this can be accomplished by using the technology-enhanced item as the referent for developing the paper-based version where possible); and
- Review item statistics from field testing for students with disabilities and English language learners prior to selection of operational items.

A.4.3.e. <u>Number of Items to be Developed</u>.

For each year, grade, content area and item type in the summative assessments, the Contractor will identify the expected number of items that will be developed to be taken to item review, the number expected to be accepted, the number expected to be included across the test forms during field testing and the number expected to be accepted at data review. Contractor is required to provide enough items that pass data review to meet refresh and release requirements for each item type.

Based upon the current test designs and mutually agreed upon overage assumptions, the following tables provide the annual development plans by grade and subject in order to meet the current development needs.

The Contractor will review the item bank annually to determine if any adjustments are needed to future item development plans.

Science Item Development – Total Items Developed

Summative – Science*		2012/2013 and 2013/2014	2014/2015	2015/2016	2016/2017
Grade 5		275	72	42	34
Grade 8		275	72	42	34
High School		275	72	42	34
Total		825	216	126	102

Social Studies Item Development – Total Items Developed

Summative – Social Studies*		2012/2013 and 2013/2014	2014/2015	2015/2016	2016/2017
Grade 4		200	71	39	39
Grade 7		200	71	39	39
High School**		200	71	39	39
Total		600	213	117	117

*Annual item development totals are to support the embedded field test in the following year.

**The introduction of the extended constructed item type may slightly impact the number of Social Studies items to be developed. Any revised totals will be mutually agreed upon with CDE and the Contractor.

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A.4.4. <u>Electronic Item Development System and Item Bank</u>.

A.4.4.a. <u>Item Development System</u>. Item development for the Summative Assessments shall be carried out using the Contractor's secure encrypted electronic item development system. The Contractor shall complete item development and internal review tasks within the Contractor's item banking system, Item Tracker Test Builder (ITTB). Also, CDE shall have direct access into the item bank, working via a secure web- based interface. Access through this interface shall be secured through user authentication and controlled by Contractor-managed credentials. All data transmissions shall be secured by 128-bit SSL encryption to help maintain the security of Colorado data moving across the Internet. All designees working on Colorado item development tasks shall be granted access to portions of the system consistent with their roles in the item development process. CDE staff and external review committees shall be able to comment on items during steps in the workflow process designed specifically for Colorado. The Contractor shall establish access policies with CDE and manage granting of access for everyone who uses the item banking system.

A.4.4.b. <u>Item Bank</u>. Assessment items shall be stored and retrieved from the Contractor's secure proprietary item bank, ITTB.

During the transition period, the Contractor shall populate the item banking system with the Colorado Academic Standards.

ITTB shall carry answer keys for Selected Response items, and scoring rubrics, all potential scorable keys, and sample responses for short and extended constructed response items, as well as Technology-Enhanced items, if appropriate. Specified item information associated with each item—such as grade, content area, grade level expectation, standard (evidence outcome and nature of science as appropriate), next generation science standard tagging when available, difficulty, and DOK level—shall be included in the item bank. The Contractor's item bank shall also indicate the APIP designations. ITTB also includes all item text and graphics, including item stem, distractors, and links to artwork and item-format data such as response type (selected response and constructed response). Item statuses shall also be carried in ITTB (e.g., not yet reviewed, content and sensitivity/bias reviewed, field tested, data reviewed, and operational use history).

<u>Data Elements</u>. Examples of data elements included:

- Test form data, such as form designation, position on form, administration date, field test/operational test designation, and anchor/linking designation
- Classical statistics for Selected Response items, such as n counts, *p*-value, biserial, point-biserial, biserial and/or point-biserial by distractor, distribution of responses by distractor, omit, not reached, and double grid for Selected Response items
- Classical statistics for Constructed Response items, such as mean, standard deviation, and score distributions
- IRT statistics, such as difficulty, discrimination, guessing, and model fit
- DIF statistics, such as focal and reference counts, DIF values, and flags for each focal group

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The Contractor shall load these elements into ITTB, shall perform quality checks through summary statistics reporting and manual inspection of sample records, and shall deliver them to CDE according to the schedule for each assessment. The Contractor shall follow CDE's procedures for obtaining approval for operational use of each item. Individual items shall have a unique identifier assigned.

The Contractor shall set up ITTB for the Colorado summative assessments, maintaining all aspects of the bank, and updating the item bank on an ongoing basis.

The QTI standard shall be the subset where APIP standards shall reside, when and if CDE determines the need to support this standard for accessibility.

A.4.5.   Development Process and Cycle.

A.4.5.a. Performance Event Stimuli Selection and Storyboard Creation.

The Contractor's content and editorial experts shall thoroughly review all passages and stimuli, previously published and commissioned, before they are submitted to CDE for approval. The Contractor shall work with CDE to provide an item bank that is balanced and adheres to CDE requirements.

The Contractor shall evaluate passages and stimuli against the following criteria:

- Complexity. Passage and stimuli selection shall focus on increased text complexity keeping in mind the value CDE places on the use of authentic, classic, and historically significant material.
- Overall Quality. Passages and stimuli for all content areas must reflect the quality and complexity of the content studied in Colorado classrooms and dictated by the Colorado Academic Standards. Passages and stimuli must contain enough complexity, density, and interest to generate challenging items in associated content areas.
- Appropriateness of Content. The content of all passages and stimuli shall not, in any way, be objectionable or unfairly accessible to any group of students. Many topics are appropriate for classroom discussions — where the teacher can guide and moderate discussion — but are not appropriate for standardized tests. The Contractor shall avoid content or wording that could be construed as offensive to or biased against members of specific ethnic, gender, or racial groups, or students with physical, hearing, or visual challenges. The Contractor shall use checklists incorporating the best practices and shall work with CDE staff to refine guidelines for appropriate context content.
- Diversity. The Contractor shall work with CDE to confirm that previously published and commissioned passages and stimuli for all content areas reflect an awareness of and responsiveness to the diverse backgrounds, cultural traditions, and viewpoints found in Colorado.
- Variety. Under CDE direction, the Contractor shall work to make certain that reading passages and stimuli for all content areas represent a variety of subjects, genres, authors, sources, and publication dates so that they reflect, insofar as possible, the kinds of reading citizens encounter in their daily lives in Colorado (e.g., government and historical documents, maps, travel guides, etc.).

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The Contractor shall perform a thorough content and editorial review process of all passages and stimuli, whether previously published or commissioned. Ultimately, CDE shall have the final authority to accept or dismiss any edit or concern regarding any of the passages and stimuli selected for any of the Colorado summative assessments. After selecting the commissioned, previously published, or public domain passages and stimuli, the Contractor's content experts, editorial and research teams, and fairness reviewers shall review them thoroughly, with the following specialization:

- The Contractor's content experts shall review the work for grade-level appropriateness and the potential to support quality items targeted to the Colorado Academic Standards.
- The Contractor's editorial team shall review the contexts for grammatical accuracy, and the Contractor's research team shall review the commissioned submissions to confirm they are factual.
- The Contractor's fairness reviewers will verify that there are no bias or sensitivity issues in the passages or stimuli as previously described.

After the Contractor has thoroughly reviewed the passages and stimuli, the Contractor shall submit them to CDE for approval. Then, the approved materials shall be put before the Performance Event Stimuli and Storyboard Review Committee for their review and consensus opinion of the quality of the work. CDE will review the committees' input and make the final determination of acceptance.

The Contractor shall secure appropriate copyright permissions for the previously published contexts including passages, graphics, art or other stimuli that CDE accepts for item development. The Contractor shall secure permissions for these materials for use in online and paper-based assessments as well as for public release on the Internet. Copyright permission shall include the production of the various printed test forms that could be required: pilot, field test, and operational. In the event the Contractor cannot obtain permissions for unsecure Internet presentation, the Contractor shall work with CDE to develop alternative presentations. The Contractor shall update the item bank to include the terms of the permission, including the expiration dates.

The Contractor shall generate storyboards to outline the stimulus, interactions, and response portion for each appropriate simulation and performance event. Storyboards can be generated in different formats in order to meet CDE needs, but shall have basic structures that remain constant. The Contractor shall develop each storyboard to include graphics that show both static features as well as functional or interactive parts. Functional specifications will describe the method of item interactions required by the student in order to respond to the question or to demonstrate skill acquisition. The storyboard shall be presented in a format consistent with how item stimuli are seen by the student and end with expected correct responses.

A.4.5.b. Performance Event Stimuli and Storyboard Review (Educator Meeting). The Contractor shall incorporate the relevant insights and observations from state educators who participate in Performance Event Stimuli and Storyboard Review meetings starting in year two.

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Committee members shall review stimuli and storyboards to confirm that they meet several requirements for the Colorado Summative Assessment, including but not limited to the following:

- Selecting a variety of complex, high-quality stimuli genres
- Construct appropriate stimuli as dictated by grade level
- Organization and focus
- Student interest level
- Concept appropriateness as dictated by grade level
- Absence of potential bias/sensitivity issues or topics
- Appropriate reading level as dictated by assigned grade level
- Strong, appropriate content that will yield strong items that meet the Colorado Academic Standards

For each meeting, the Contractor shall prepare and provide all required review materials in as close to final format as is possible, including art work, illustrations, photos, and graphics. In addition to stimuli and storyboards, the Contractor shall bring all needed ancillary materials in hard copy to promote successful committee meetings, including appropriate reference materials, as approved by CDE. The Contractor shall take the lead, as deemed appropriate, for the training at the beginning of each Performance Event Stimuli and Storyboard Review meeting. The Contractor shall share the training materials and agendas with CDE approximately two weeks prior to the Stimuli and Storyboard Review meeting. CDE may review and edit materials and approve the final format of all stimuli and storyboards. The Contractor shall organize the stimuli and storyboards for review. The Contractor shall also provide committee members with all required forms, including confidentiality/security agreements and directions for obtaining reimbursements.

The Contractor shall provide storyboards instead of fully functioning simulations during this phase of item development. Fully operational items will be reviewed during Content and Bias/Sensitivity Review. CDE shall have the opportunity to review and approve the items with full functionality before administration.

In coordination with CDE, the Contractor shall recruit participants to attend the Performance Event Stimuli and Storyboard Review meetings. For science and social studies, the Contractor shall verify that a minimum of three diverse educators per grade/content area are in attendance. CDE staff members shall make the final selections.

During the Performance Event Stimuli and Storyboard Review meeting, the Contractor shall provide instruction on completing security and travel forms, track and check in/out secure meeting materials, facilitate and actively solicit feedback from committee members, listen to participants, provide clarification or rationale as when requested, maintain a respectful attitude toward all participants and all comments made, and record committee input and recommended changes.

The Contractor facilitators shall record all committee input in an electronic PDF file, with a location to mark the committee's judgment as *accept as is, accept with edits*, or *reject.* At the conclusion of each meeting, the Contractor shall

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discuss issues or discrepancies with CDE staff found in the notes or committee recommendations. The Contractor shall compile and share the results with CDE. CDE shall have final determination on status of these stimuli and storyboards in the item bank and all results. The Contractor shall implement all edits authorized by CDE where possible.

A.4.5.c. <u>Item Development Workshops (Educator Meeting)</u>. Workshop members shall develop Selected Response, Short Constructed Response and Extended Constructed Response items. Starting in spring of 2013, the Contractor shall work with CDE to train selected educators to develop performance events and technology-enhanced items, including simulations. CDE requires that items to be field tested in the spring of 2013 be partially generated by Colorado educators. In time to meet the above requirement, it is expected that workshop members will have met in person to participate in item writer activities for a three-day workshop. Beginning in the spring of 2013 (and annually after that), members will participate in two, two-day workshops. The Contractor shall, with the guidance of CDE, recruit Colorado educators and conduct one set of Item Writing workshops annually. These meetings are to develop sufficient quality items for the initial stand-alone field tests and to begin building a pool of items for future embedded field test slots. The Contractor shall have specially trained content area assessment specialists serve as mentors on site and, if needed depending on the number of educators in attendance, shall have assessment specialists available online for the purpose of monitoring individuals' progress and providing individual and constructive feedback.

The Contractor shall use their best practices guidelines to evaluate each and every item, including match to standard, unambiguous language, plausible distractors, and grade level appropriateness, among others.

The Contractor shall recommend that item writers receive several documents that will help them understand the foundational elements of the Colorado assessment program. These documents may include the following:

- A general session PowerPoint presentation addressing the fundamentals of item writing common to all content areas
- Content-specific PowerPoint presentations addressing issues particular to those content areas
- The Colorado Academic Standards
- Templates for each item type
- Children Writer's Word Book
- Every Day Language
- Item Development Plans for every assessed grade in each content area
- A copy of the Colorado assessment program's test and item specifications
- Confidentiality/nondisclosure forms submitted to CDE for review and revision as needed
- Specific item guidelines for items that are automatically scored and Technology-Enhanced items starting in year two
- Information on how to write items in order to avoid problems of bias and sensitivity
- A checklist for item writers drawn from the item writing guidelines documents

The Contractor shall provide the introductory and training materials to CDE for review and approval two weeks prior to the workshop. Generally, the Contractor shall include the following for the content validity and technical quality portion of Item Writer Training:

- An overview of the purpose and scope of the assessment
- An overview of the test characteristics
- An analysis of the program-specific test and item specifications
- An overview of students with disabilities and English learners principles in assessment
- An overview of cognitive complexity (DOK levels)
- An overview of Universal Design in Assessment (UDA)
- Criteria for evaluating Selected Response and Constructed Response test items and scoring rubrics
- Techniques for developing and evaluating writing prompts for social studies

At the conclusion of the first development meeting, the Contractor shall inventory the items that have been created. The Contractor shall give specific item writing assignments to each developer for the remaining items that are needed.

The Contractor shall create schedules for the developers to submit items for review and receive feedback. Developers will have the opportunity to revise assigned items prior to the second item development meeting. The Contractor shall maintain a secure delivery method for items and feedback between developers and the Contractor.

A.4.5.d Item Revision and Supplementation.

Once items are accepted from a developer, the Contractor shall further review and revise the items, as needed, to meet CDE's expectations. The Contractor's process for review includes three internal content reviews, an internal editorial review, and an internal bias and sensitivity review. Throughout this multi-step item review process, the Contractor's assessment specialists shall continuously evaluate the match of the items to the standards, the appropriateness of the items to the population being assessed, the importance of the information being assessed, the implications for instruction, review and edit each item for technical quality, as well as conformity with Colorado Test Item Specifications and the Colorado Style Guide. If an item is unrelated to the content standards, is developmentally inappropriate, measures trivial information, or provides inappropriate models for instruction, the Contractor shall revise or eliminate it.

The Contractor shall have three levels of internal reviews of items: assessment specialist review, content area specialist review, senior-level content staff review. The Contractor shall use the following guidelines for these reviews:

- Match of each item to the identified standard
- Match of each item to the principles of high- quality item development
- Accuracy of the content of the item
- Difficulty of the item
- Adherence to the principles of universal design

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- Relevance of each item as the item relates to the purpose of the test
- Readability of the item
- Appropriateness of any artwork, graphs, figures, etc.

During the first year of development, Colorado educators shall develop approximately 25 percent of the items and the Contractor shall use trained outside item writers to develop the remaining 75 percent of the items. Should Colorado educators be unable to develop this percentage of usable items, the Contractor shall assume responsibility for remaining item development. The Contractor's item writers shall have demonstrated expertise in item writing in the contracted content areas and grade spans. The Contractor shall train these item writers on the specific Colorado Assessment Standards, Colorado item styles, and general item specifications. In subsequent years, the development responsibilities shall shift toward Colorado teachers developing approximately 90 percent of the items and outside item writers developing the remaining 10 percent of the items.

Ultimately, the Contractor is responsible for the development of the needed number of items for each content area and grade level so that post item review, field testing and data review, there are sufficient items to build each year's operational assessment.

A.4.5.e. <u>Content and Bias/Sensitivity Review (Educator Meeting)</u>. In coordination with CDE, the Contractor shall take the lead in the recruitment of panelists, providing the necessary logistical support and information for the panelists as they confirm their arrangements for participation in either the content or the bias review meetings. Educators participating in item writing are not eligible to participate in these reviews for the same grade/content area. For each meeting, the Contractor shall prepare and provide all required review materials. These materials shall be in as close to final format as is possible, including passages, artwork and illustrations, photos, and graphics. The Contractor shall bring passages, items, and ancillary materials in hard copy to promote successful committee meetings, including appropriate reference materials, as approved by CDE. The Contractor shall take the lead, as deemed appropriate by CDE, for the training at the beginning of each committee meeting. Beginning with development for year two, the Contractor shall share all training materials and agendas with CDE at least two weeks prior to each meeting. CDE may review and edit materials and approve the final format of all training components. The Contractor shall provide committee members with all required forms, including confidentiality/security agreements and directions for obtaining reimbursements.

The Contractor shall train committee members to evaluate all item types, to know the purpose and scope of the Colorado summative assessments and the test design and item specifications, to review items for instructional sensitivity, to recognize bias and sensitivity issues, relevance in terms of the purpose of the test, Depth of Knowledge and alignment to the Colorado Academic Standards, difficulty range, clarity, correctness of the answer, and plausibility of the distractors. Committee members will also be trained to recognize bias and sensitivity issues. Training shall also include having committee members review samples of items and stimuli that might be considered biased. The Contractor

shall work with CDE to incorporate Colorado-specific issues or topics into the guidelines before the training.

The Contractor shall record all committee material utilizing PDF markup, with a location to mark the committee's judgment of "Accept as is," "Accept with edits," or "Reject." At the conclusion of each meeting, the Contractor and CDE representatives shall discuss issues or discrepancies in notes or committee recommendations.

The Contractor shall compile and share results from the Content and Bias/Sensitivity Review meetings with CDE. The Contractor shall implement all edits suggested by each review committee or will delete the item(s) from the pool. CDE shall receive summary results from the review meetings, including the total number of items accepted as is, the number of items with revision, and the number of items rejected.

CDE will make the final decision on all revisions to be implemented for the assessments.

A.4.5.f. Field Testing (Initial and Embedded). The Contractor's team of assessment specialists shall assemble field test sets of items so that they comprise the appropriate distribution of standards, item types, topic coverage, expected item difficulty cognitive levels, and key distributions. The initial field test forms shall align to one session of the operational assessment. For embedded field testing, location of field test slots should vary from year to year. The Contractor shall select items primarily from approved new development, but may select from the item bank if it contains items that still require field testing or re-field testing. The Contractor shall present to CDE for approval the proposed field-test items in item card format. After approval by CDE, the Contractor shall embed field-test items into approved field-test item positions of the operational form in composed test booklet or online format.

A.4.5.g. Data Review (Educator Meeting). Once annual testing is complete, the Contractor shall facilitate a Data Review workshop to review all items with their statistical data. For each meeting, CDE shall identify committee members. Four to five attendees per grade level band from across the state shall be invited to attend the meetings. The Contractor shall work as needed with CDE staff to locate a representative sample of teachers from across the state. Each content/grade-level meeting shall be facilitated by an experienced content expert. The Contractor's facilitators shall work closely with the Contractor's psychometricians and CDE staff during these meetings. Data Reviews to support supplemental field testing will be completed by Contractor and CDE staff only.

The Contractor's assessment specialist and psychometricians shall work under the direction of CDE to co-facilitate these meetings, determine roles and responsibilities, and to define the criteria for acceptable or unacceptable item statistics. The Contractor shall export item level-data from field-test analyses on item cards and provide the item cards for the item data reviews for flagged items. These item cards along with other training materials shall be provided for CDE's review at least two weeks prior to the meeting.

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The Contractor's psychometricians shall begin these meetings by conducting a training session on how to interpret the data and review items. The Contractor shall engage panel members in discussions regarding items with questionable statistics and record committee recommendations on whether or not to accept or reject each item for inclusion in the Colorado item bank. The Contractor shall use item cards that include the item itself, item difficulty statistics (mean item score), item score-test score correlation, percent of low, middle, and high scorers and the overall group choosing each option, and Differential Item Functioning (DIF) results. Other information can be included as well, if desired by CDE.

The Contractor's facilitator shall record all committee input in master item books, with a location to mark the committee's judgment of "Accept as is," "Revise and re-field test," or "Reject." At the conclusion of each meeting, the Contractor and CDE shall discuss issues or discrepancies in notes or committee recommendations.

The Contractor shall compile and share the results from the Data Review meetings with CDE. CDE shall have the final determination on status of these items in the item bank. The Contractor's plan of action and timeline describe how and when each of the training and support tasks will be accomplished. See Section A.10.2 for additional information.

A.4.6.   Form Development.

A.4.6.a. Regular Form. The Contractor's assessment specialists shall select a set of operational and anchor items in accordance with the test blueprints and test construction specifications. Items selected for use operationally and as anchors shall meet the blueprint with a variety of topics and contexts with specified psychometric targets. The Contractor shall follow these guidelines during form construction:

- Review of the constructs and content included within each content strand (or reporting category) to establish that items address the breadth of content within each strand
- Balance of gender, ethnicity, geographic regions, and relevant demographic factors
- Thorough review of individual items to establish data within items is up to date and relevant
- Adherence to established test specifications and blueprints
- Selection of items with various stimuli type throughout the test form to enhance the test-taker experience by providing variation in the appearance of item types presented
- Efficient and deliberate use of varied content representative of the knowledge and skills in the CAS
- Review of full form, including field test items, for instances of clueing and/or content overlap
- Year 1, a minimum of 20% of standalone items are technology-enhanced. For all subsequent years, a minimum of 25% of standalone items are technology-enhanced
- Replacement rates are met:

- Year 1, the refresh rate is at least 35% and a minimum of one item for all item types (standalone SR, standalone 2pt CR, standalone 3pt CR, performance event, and simulation)
- Year 2, the refresh rate is at least 30% and a minimum of one item for all item types (standalone SR, standalone 2pt CR, standalone 3pt CR, performance event, and simulation)
- A unique form must be used in Year 3.
- For all other years, appropriate replacement rates will be mutually agreed upon prior to contract extension.

The Contractor's psychometricians and assessment specialists shall review each test form. The Contractor shall consider the following factors in test assembly:

- Select only items that are eligible for operational use (i.e., have appropriate field test item statistics that have been approved by CDE for use, have not been exposed and have not been retired).
- Confirm appropriate distribution of difficulty range across items.
- Confirm appropriate distribution of cognitive levels across items.
- Check for balanced key positions across all four options for multiple-choice items.
- Verify items have been tested operationally in three or fewer operational administrations to limit exposures for items.
- Where ever possible highly memorable items, unless an anchor item, were not used in the previous year
- Verify that the anchor set meets technical requirements:
  - Content match to full form
  - Proportional match to psychometric targets, including mutually agreed upon maximum test characteristic curve differences.
  - Item position same as prior use (maximum shift of 3 when necessary and CDE approval)
  - Taken from prior year's form unless a different approach receives CDE approval

The Contractor shall retire or deactivate operationally available items after their fourth operational administration. Pending specific item needs during forms construction, CDE may approve the operational usage of otherwise viable items that have had four operational usages.

The Contractor's lead psychometrician and assessment specialist shall complete the initial selection of the linking items and share them with CDE for input. The Contractor's psychometric staff shall conduct statistical reviews throughout the form building process, and shall provide input and final approval of a core form. The Contractor shall document changes or edits in a log throughout the iterative process of review and input with CDE specialists. CDE shall give final approval.

A.4.6.b. <u>Breach Form</u>. The Contractor shall use one embedded operational form of the first year's assessments as the breach form starting with the third administration. An online breach form shall be available for assessments that are online. Where possible, the same breach form shall be used for the life of the contract, including any extensions.

A.4.6.c. <u>Paper/Pencil Accommodated Forms</u>. For each content area's online operational forms, the Contractor shall develop a paper-based form from the first version of

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the online assessment, which is the version that will be used to create large print, Braille, and oral scripts versions. Any computer-based items for science and social studies or simulations for science that cannot be reproduced for the paper-based form shall be replaced with comparable, accessible items developed concurrently with the parent item. Beginning in the third operational year, the paper-based and accommodated versions of each online assessment will be reused for subsequent operational administrations for those students requiring the accommodated paper version. They will include embedded field test items from this version, but embedded CR field test (FT) items will not be scored and item scores will not be used in FT item analyses.

A.4.7. <u>Accommodated Materials and Administration Procedures</u>.

A.4.7.a. <u>Accommodated Procedures</u>. Depending on the particular test, the possible accommodations may include, but are not limited to, the following:: Braille, Large print, Recorded audio, Separate room, Oral English script, Sign language interpreter for spoken directions only, Recorder of responses (scribe), Extended time, Tactile graphics, Extra breaks, Oral interpreter for spoken directions only, Handheld four-function calculator, Selectable background and foreground, colors

The Contractor's Alternate Test Format (ATF) group shall collaborate with assessment specialists and approved Braille vendors to produce embossed Braille materials.

A.4.7.b. <u>Large Print</u>. The Contractor shall apply customized layout solutions to every test to maximize accessibility related to the print specifications regarding the font size, paper stock, and binding. For the first two operational years, the Contractor shall create paper large print versions using the approved paper/pencil accommodated form as the basis. Beginning in the third operational year (and each year thereafter), the large print version from the second operational year will be reused.

A.4.7.c. <u>Braille</u>. The Contractor shall facilitate Braille reviews of final test forms with CDE and committees of teachers. The meeting facilitator shall guide the committee through an initial training session, an accessibility review of the items, and obtain majority consensus on revisions that are required for Braille. If required, the finalized item revisions will be provided to CDE for approval.

The Contractor shall create the regular print form for use with test-takers requiring paper-based accommodations. The form shall be assembled from a set of fully accessible items. The Contractor's alternate test format team member shall conduct an accessibility review of the paper-based test form prior to assembly, in consultation with the assessment specialist, to establish the adaptability of all items included on the form. Consequently, it will not be necessary to omit or replace any items that cannot be Brailled. Inaccessible items shall be flagged in the Contractor's item bank. For the first two operational years, the Contractor shall create Braille versions using the approved paper/pencil accommodated form as the basis. Beginning in the third operational year (and each year thereafter), the Braille version from the second operational year will be reused.

The Contractor's recommendations for the development of test material for students who are visually impaired may consist of the following:

- Identifying items that should not be Brailled due to the inappropriateness of the content for a visually impaired student
- Suggestions for the scripting of art or graphics related to an item
- Suggestions for minor modifications to art or graphics for Braille reproduction

In the adaptation of materials for Braille, the Contractor shall not cue the key to an item, omit information that is needed to answer the question, or include extraneous information that is unnecessary for responding to the item. The Contractor shall review the adapted test content to establish accuracy and validity. Following the assessment specialist's approval of the adapted test content, the Contractor shall submit the test to a CDE- approved Braille vendor for embossing.

A.4.7.d. <u>Teacher Read Directions</u>. The Contractor shall work with CDE to incorporate teacher-read directions in conjunction with building test forms and administration manuals. The Contractor shall work with CDE staff to develop a comprehensive set of instructions that cover all content areas. The main sections shall include the following:

- Pre-administration preparation, including schedules, examiner's responsibilities
- Materials needed
- Test security procedures and protocols to be applied during the test administration
- Process to include how to handle student questions and enquiries
- Directions regarding processes to follow for document distribution and completion during the test administration process
- Instructions specific to the administration of each section and content area
- Appendices with forms and documents required in the test administration process

The Contractor shall work with CDE staff to develop a comprehensive set of instructions that cover all online administrations and are included in the online administration manuals. This publication shall include clear instructions for guiding students through online navigation including how to use tools, how to mark items for further review, and how to submit answers upon completing the test.

A.4.7.e. <u>English Oral Scripts</u>. The Contractor shall prepare English oral scripts for Science and Social Studies for both the paper-based accommodated forms created in operational year 1 and year 3 and annually for one of the computer-based forms. These scripts shall serve the following two purposes:

- As the script for voice talent during audio recordings for both the computer-based and paper-based form.
- For use by examination proctors who read a test form to a student, including a translated test form in a language other than Spanish created by districts for both the computer-based and paper-based forms.

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A.4.7.f   Spanish Oral Scripts. The Contractor shall prepare Spanish oral scripts for Science and Social Studies for both the paper-based accommodated forms created in operational year 1 and year 3 and annually for one of the computer-based forms. These scripts shall serve the following two purposes:

- As the script for voice talent during audio recordings for both the computer-based and paper-based forms.
- For use by examination proctors who read a test form to a student for the paper-based forms.

The Contractor shall manage the production of Spanish oral scripts in consultation with bilingual assessment specialists to establish content accuracy.

A.4.7.g.   Certification for District Translators. While there is no chapter of the American Translation Association (ATA) within Colorado, some fully certified members of that association may reside within the state. Additionally, the Colorado Translators Association (CTA), while not directly affiliated with the ATA, provides certifications and has a pool of qualified members. CDE and the Contractor shall inform districts of the CTA and how to contact CTA as part of the process.

Colorado Translators Association (CTA)
615 S 46th Street, Boulder CO 80305
(303) 499-9622
www.cta-web.org

Other individuals may also be bi-lingual/bi-literate and able to meet the needs of Colorado students. The Contractor shall also assist CDE in defining the qualifications for translators who are neither ATA nor CTA certified. The Contractor shall publish those qualifications. In addition, translations shall be with a written statement from the translator that the translation is true, accurate, and correct "to the best of my knowledge and ability."

In order for local districts to obtain certifications that satisfy CDE requirements, the Contractor shall develop a certification form in collaboration with CDE and place that certification online for district download and use. The local districts shall be responsible for confirming that translators complete the forms and for maintaining the forms and any required evidence for each assessment year, for a time period determined by CDE.

In the event that the Contractor receives any inquiries or questions regarding such translations, the Contractor's program manager will notify CDE. He will indicate the source of the inquiry, the district referenced, and the nature of the inquiry (if such information is available). CDE will then be able to follow up with the district and determine any subsequent inquiry or actions.

A.4.7.h.   Spanish Reading and Writing. CDE reserves the right to exercise the option of administering Spanish Reading and Writing assessments. Should Colorado choose to move forward with this option, specific details will be negotiated in the future.

A.4.8.   Document Development.

A.4.8.a. <u>District and School Assessment Coordinators Manual</u>. The Contractor shall provide coordinators manuals for the Colorado Student Assessments based on CDE specifications and parallel to existing TCAP manuals where appropriate. The Contractor shall work with CDE to design a District and School Assessment Coordinators manual regarding the logistics around statewide assessment.

The Contractor shall send one hard copy to each district's central office and one copy to each school. In addition, the Contractor will distribute copies of this manual at the test administration workshops held approximately one month prior to test administration. This manual will contain descriptions of testing procedures and directions for secure test administration and materials handling in accordance with state policy as well as directions on security, packaging, and shipping. The Contractor shall make these manuals available via hard copy and online PDFs that allow text searching.

For the field-test year, district and school assessment coordinators manuals will be available electronically only.

The development shall follow a two-phase process: content determination and content development.

In the content determination phase, the Contractor shall work with CDE to evaluate the following:

- Current manuals to help determine a design template and the information that should be presented in new manuals
- Clarity of the instructions provided
- Information relating to performance of described tasks

After defining the content scope, the Contractor shall proceed with content creation. The Contractor shall check the text against the actual task performed to clarify instructions and include relevant steps. The Contractor shall work with CDE to obtain information, text, reviews, and approvals as needed. To develop products such as manuals, the Contractor shall use the following process:

- Compose the document after receiving approval of the final manuscript.
- Provide an editorial review of the file and deliver a technically sound document to CDE for review.
- Cross-check to other related materials to confirm consistency.

A.4.8.b. <u>Proctors Manuals</u>. The Contractor shall produce Proctor's Manuals for each grade level of the assessment. The Contractor shall develop the Proctors Manuals with input from CDE and according to CDE specifications. These manuals will be available in traditional hard copy and online via PearsonAccess™ and the CDE website as PDFs. The Proctors Manuals shall include changes to the assessment from the previous year, annual timeline of activities, security procedures, specific assessment procedures, instructions for the online system, and other topics as necessary.

For the field-test year, Proctors Manuals will be available electronically only.

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A.4.8.c. <u>Certification Forms</u>. The Contractor shall outline the steps it will take to develop DAC, School Assessment Coordinator (SAC) and Examiner certification forms indicating that ethical standards, security procedures, and standard assessment administration procedures were followed throughout the assessment process. Forms shall also include space to indicate deviations from any of those. The Contractor shall provide an efficient means to collect, document and store these certifications.

The Contractor shall include students in the security certification process for both paper-based administrations and online administrations. The Contractor's program team is prepared to work with CDE to explore how best to include students in this process while protecting the rights of the students and maintaining the integrity of the Colorado assessments. All final decisions related to student certification will be made by CDE.

A.4.8.d. <u>Test Booklets and Scannable Answer Documents</u>. For all operational administrations, consumable test booklets in color will be produced. For operational years 1 and 3, the Contractor shall carefully design and produce paper/pencil accommodated test booklets for each grade and subject based upon a mutually agreed upon version of the online form. This test booklet will be a consumable test booklet so that students can record their responses directly into the booklet. The Contractor shall involve CDE staff in reviewing and approving the test booklets. At each step, CDE, ETS and Contractor will review the test booklets to verify accuracy and ease of use. Additionally, the Contractor shall produce a supplemental Social Studies Performance Event booklet that corresponds to the paper/pencil accommodated form.

For operational years 2 and 4, these documents will be reproduced from the previous year.

The Contractor shall create first page proofs that the Contractor's content and editorial staff review and then submit to CDE for review and approval. CDE shall review the page proof and make any necessary edits or comments for the Contractor to apply. This review and proofing cycle will repeat until the document receives a "clean" designation and is approved by CDE. Next the Contractor shall produce the digital proof state to verify the match between the content and format of the digital proof and the CDE-approved version. The Contractor shall route copies internally for final proofreading and verification of processing specifications. The Contractor's proofreaders shall thoroughly review the proofs. After the digital proofs are approved by all parties, the Contractor shall create printing plates and print the document.

The Contractor's editors shall collect print samples and compare them with page proofs to verify quality control procedures and confirm that any requested revisions were made. At that point, we will print and prepare for distribution of the secure summative assessment test booklets.

A.4.8.e. <u>Ancillary Materials</u>. Manipulatives used to fully measure the Colorado Academic Standards will vary, depending on the concept being tested. Manipulatives provided by the Contractor could include, but are not to be limited to, rulers, protractors, paper geometric shapes, , and other grade-level,

content-specific materials. For tactile representations, districts will be given a manipulative list for each computer-based administration which may include items found in the classroom or in rare cases requiring purchase.

A.4.8.f. <u>Sample/Released Items, Including Worksheets</u>. Selecting an item pool for public release that not only is representative of the assessments, but can guide classroom instruction, will be critical to this program's success. Each year starting in the first year of the Contract (2012-2013), the Contractor's content specialists shall recommend items of each item type in each content area and grade which will be as representative of the assessments' cognitive complexity and content coverage as possible. CDE staff shall review the recommendations and make final decisions. The Contractor shall collaborate with CDE to prepare answer key documents and scoring guides which will provide teachers with the correct answers, scoring rubrics, standards assessed, and item statistics. The items shall be presented in such a way that they will be easily downloadable for use in the classroom.

A.5. Assessment Administration

A.5.1.   <u>Work Plan</u>.

The Contractor shall adhere to the mutually agreed upon detailed schedule that outlines the tasks and durations for each year of the Contract. The draft schedule is included in Exhibit B. In each year of the Contract, student, school, and district data shall be loaded into the PearsonAccess™ system. For each year of the Contract, test materials shall arrive two weeks before the assessment administration.

The Science and Social Studies assessments shall be administered operationally online in the first year.

A.5.2.   <u>Test Window</u>. The test administration window shall be according to the following schedules for 2013 and 2014.

2013 Assessment Administration	Start Date	End date
Initial Science and Social Studies Field Test Administration (This will include Science and Social Studies at elementary and middle school.)	4/29/2013	5/17/2013
Additional Science and Social Studies Field Test Administration (This will include Science and Social Studies at elementary and middle school.)	9/16/2013	9/30/2013
Initial Science and Social Studies High School Field Test Administration	10/28/2013	11/22/2013

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2014 Assessment	Start Date	End date
ELA and Mathematics Field Test (subject to inclusion of ELA and Mathematics to the contract)*	TBD	TBD
Science and Social Studies Operational Administration (This will include Science and Social Studies at elementary and middle school. Any scope beyond that will be mutually determined, agreed upon and documented between the Contractor and CDE.)	4/14/2014	5/2/2014

*The exact schedule, scope, and costs for the (unique to Colorado) ELA and Mathematics will be mutually agreed upon by CDE and Contractor through a finalized contract amendment.

The specific test windows for 2015, 2016, and 2017 shall be determined with input from CDE. Post administration activities, such as standard-setting, will take place after the first administration of each subject area assessment.

A.5.3   Materials Ordering.

A.5.3.a.   Pre-ID/Registration File and Labels.

Colorado shall have a single data source for uploading and managing student Pre-ID/Registration information. The Contractor shall maintain a single student data source for paper and online testing, so users can manage data for both testing modes in one place, using one online interface. The Contractor shall work with CDE to transfer the layout of the current student Pre-ID/Registration file so that the existing group and test assignment structure and established procedures are maintained as nearly as possible.

The Contractor shall provide quality control of the pre-coding of student answer documents and student data labels commensurate with a high stakes assessment program.

The Contractor's system shall collect student data based on the agreed upon requirements via a data file upload, or manual entry into the system. Authorized users shall be able to add, modify, and manage student demographic information that has been successfully uploaded to the Contractor's database. This includes demographic information associated with students who are excused or exempt from testing. Colorado districts and schools will have managed access to their own data, which supports data accuracy and shortens response time.

For paper-pencil accommodated versions of the assessments, the Contractor shall provide student-identifying information (pre-ID) that is preprinted on labels that may be affixed to student consumable test booklets, scanned electronically, and can be read visually The pre-ID labels should include student demographic information based on the CDE enrollment file, so hand-gridding is unnecessary. Program information shall be pre-printed; however, the information can be updated by hand-gridding at the test site to correct or update student information. The intent of pre-printing information directly onto the

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labels is to minimize administration preparation in the field. Consistent with that, labels must be printed and packaged in a way that facilitates ease in distribution (ex. by school, grade, teacher when available, last name, first name). The Contractor shall package pre-ID labels and deliver them to each designated site as part of the shipment containing test administration materials. Bar coding may be added by the Contractor to automate check-in and processing of test booklets.

A.5.3.b. <u>Materials Ordering System</u>. The Contractor shall provide a secure online electronic ordering system for DACs to use for ordering testing materials. The enrollment or pre-ID file shall be the main method for ordering test materials. The system shall include features that allow users to adjust orders for all testing and ancillary materials; and to input their accommodated forms and material orders, including specialized editions like Braille and large-print tests. The Contractor shall confirm district/school orders for materials using a web-based verification system. The Contractor shall ensure that each district's order size is reasonable when it is submitted based on enrollment and prior years' numbers of students assessed. Previous enrollment counts shall be preloaded in the online system so comparisons can be made. Previous values will display next to the participation count entry field so users can compare the previous counts with the current counts. The Contractor will calculate variances based on state-specified parameters, the previous counts, reducing the likelihood that unnecessary materials will be shipped. The Contractor shall contact any districts requesting an unusual order before materials are shipped. Authorized users will be able to make material requests after the initial order has been placed.

The Contractor shall engage in the following tracking procedure steps to secure CDE's order:

- Before packaging, the Contractor shall print a unique barcode serial number on secure test booklets and on other materials that require security.
- An inline quality control system will be used to verify that barcodes are printed sequentially on materials. Materials shall be grouped and weighed prior to wrapping to verify they are correct.
- After quality control verification, materials shall be wrapped by package size and organized on pallets for final assembly.

A.5.3.c. <u>Online Roster</u>. The Contractor's online roster system shall pre-populate using the pre-ID/Registration file provided by CDE. It shall also be used for district/school capacity planning prior to online testing

A.5.3.d. <u>Additional Materials Ordering</u>. Last minute shortages of assessment materials shall be handled quickly and efficiently by the Contractor as specified in procedures mutually agreed upon by the Contractor and CDE. The Contractor shall provide an online electronic ordering system for DACs to use to order extra testing materials. This system shall allow DACs to order additional testing materials after final enrollment numbers have been entered. The Contractor's online electronic ordering system shall provide DACs with verification that orders have been filled and provide details about when and how the shipments were made. The Contractor shall provide a list detailing the districts that submitted additional orders, what they ordered, and whether they had

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participated in the original materials ordering window(s). This system must provide verification that the orders have been filled and provide details about when and how the shipments were made.

A.5.4.   <u>Document Production</u>. An initial materials list is provided in Exhibit D. Upon mutual agreement, specifications may be modified to meet the requirements of the deliverables without cost impact. Additional deliverables will require an amendment and have potential cost impacts.

A.5.4.a.   <u>Proctors Manuals</u>. After manuals have been developed by the Contractor and approved by CDE, the documents shall be released for printing to the Contractor's certified printers. Following a final review and release, the Contractor shall package the manuals for distribution. One hard copy shall be sent to each district's central office and one copy shall be sent to each school. In addition, the Contractor shall distribute copies of this manual at the test administration workshops held approximately one month prior to test administration.

Proctors manuals will be available for PDF download only during the initial field-test year.

A.5.4.b.   <u>Scannable Test Booklets and Performance Event Booklets</u>.

CDE staff shall be involved in reviewing and approving the test booklets and Performance Event booklets produced for the Colorado Student Assessments. The Contractor shall follow a proven procedure for preparing print-ready live consumable test booklets, manuals, and other printed materials. At each step, both CDE and the Contractor shall review test booklets to verify accuracy and ease of use.

A final digital proof will be released and declared "clean" only after all review criteria have been satisfied. The documents will then be promoted to print production.

A.5.4.c.   <u>Breach Forms</u>. Beginning in spring 2016, one form from the spring 2014 administration shall be available in all subjects, at all grade levels in the event of a security breach. The Contractor shall make the form available in PDF format should CDE need to administer a breach form of the assessment. Where possible, it is the expectation that the same breach form will be used for the life of the Contract, including any extensions. When an assessment goes online, the Contractor shall make the breach form available online as well. The breach forms will be statistically equated to enable use of the scores on the forms interchangeably. The breach form will be pre-equated. Breach forms shall not actually to be printed until (and only if) such a form is needed.

A.5.4.d.   <u>Ancillaries</u>. The Contractor's content development team shall develop the specifications for ancillary materials necessary for completing the test(s). Once approved by CDE, the Contractor shall handle all procurement and distribution for required materials.

A.5.4.e. <u>Accommodated Materials</u>. The Contractor's content development team shall develop the specifications for accommodated materials production. Once approved by CDE, the Contractor shall handle all procurement and distribution for required materials. To streamline the assessment accommodations process, accommodation codes will be recorded on the Colorado student assessments answer sheets.

A.5.5. <u>Secure Distribution, Collection, Storage and Destruction</u>.

A.5.5.a. <u>Packaging</u>. The Contractor shall provide orderly, accurate, and timely packaging and distribution. The Contractor shall provide pallet maps to indicate where DACs may find the materials ordered. The Contractor shall provide security during pre-packaging and assembly and shall improve accuracy through a pick and pack process. Schedules shall be met with on-time shipping and a timesaving materials check-in process. Materials shall be separately packaged by district and school and sent to the DACs while maintaining accuracy of orders. The Contractor shall track all materials as they progress through the packaging system and through final shipment to districts. The Contractor shall use its software and barcode-scanning process controls to assist with quick and secure receipt of testing materials and accurate distribution to individual districts and schools in Colorado. The Contractor shall assume and maintain a 10% overage of all materials to support last minute requests or shortages from districts.

Materials inventories, including the accommodated materials, will be closely monitored during the materials ordering window. The Contractor will work with districts to ensure accurate enrollment counts were entered. Shortages of materials due to unexpected influxes of a population will be quickly addressed through reproduction with the approval of CDE. Additional reprints may be handled through a change control process.

A.5.5.b. <u>Distribution and Collection</u>. For pencil-paper versions of the assessments and for scorable and non-scorable testing materials, the Contractor shall be responsible for the distribution and collection of testing materials, including outgoing and incoming assessment materials, as well as hard copies of reports. CDE will provide shipping and contact information for each DAC. The Contractor shall follow CDE security specifications during pre-packaging and assembly. Before packaging, the Contractor shall print a unique barcode serial number on secure test booklets and on other materials that require security. An inline quality control system will be used to verify that barcodes are printed sequentially on materials. Colorado student assessments materials shall be packed carefully as they progress from station to station for sealing, bar-coding, and shrink-wrapping toward final shipment. The Contractor shall group and weigh materials prior to wrapping to verify that they are correct. After quality control verification, the Contractor shall wrap materials by package size and organize them on pallets for final assembly. The Contractor shall apply an adhesive security seal to Colorado student assessments test booklets, so students cannot look at questions before a test begins. For multiple subject books, seals will be manually applied to test book sections. The Contractor shall identify and

track secure Colorado student assessment materials with barcode serial numbers.

Secure bonded freight carriers and/or courier services shall be used for distribution and collection. Delivery and collection activities must conform to a rigid date/time schedule set by CDE. The Contractor shall use a brightly colored label on the outside of each box. This label will include the wording "ATTENTION: District Assessment Coordinator" (or other district personnel as stipulated by CDE) to indicate that the enclosed materials should be brought to the immediate attention of the appropriate district personnel. The size of the label must be appropriately large. Because the materials will contain secure and individually identifiable materials, all materials must be shipped with signature required for delivery. Verification of receipt of 100% of the shipments is required. Delivery of shipments is required no later than fourteen days before the assessment begins.

The Contractor shall provide Colorado districts with a detailed packing list and pallet map that will assist DACs in locating specific testing materials. Information on the pallet map shall include the pallet number, school or district number supplied by CDE, box range (e.g. 1-20) for each district/school location, the number of boxes for each district/school location on the pallet, and the total number of boxes on each pallet. When shipping the district's test materials requires more than one box, the Contractor shall indicate the actual number of boxes that have been sent (e.g., Box 1 of 10, etc.). The Contractor shall provide carrier information so that DACs can track shipments. The Contractor shall use the email addresses provided by CDE to alert DACs with an email when an order has been shipped.

To help Colorado district representatives easily check shipments for accuracy when they arrive, the Contractor shall include the following easy-to-read shipping reports:

- Packing Lists and Pallet Detail Reports provide accurate information about the quantities of materials boxed and to what locations they were shipped.
- A Security Report lists each individual barcode number assigned to each site.

Colorado district representatives should complete the following steps after Colorado summative materials arrive:

1. Verify the shipment
2. Confirm the inclusion of all secure materials
3. Check that barcode ranges correspond to the Security Report
4. Complete the report, note any discrepancies, sign it, and return it to the Contractor along with the test materials.

In addition to collecting the testing materials produced by the Contractor, the Contractor will also be responsible for collecting materials created by the districts (ex. translated oral scripts) required to administer the assessments appropriately.

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A.5.5.c. <u>Materials Storage and Destruction</u>. Colorado student assessments materials shall be stored as follows:

- Secure materials that do not contain student responses will be stored for six months (180 days) after reporting.
- Paper documents with student responses will be retained for one year (365 days) following scoring and reporting.
- Electronic images and files will be retained for the life of the Contract, including extensions of the Contract, and an additional 12 months after the Contract ends.
- For raw materials that cannot be reused in future administrations, the Contractor will stage them for destruction six months following delivery. Materials will be staged for destruction at the end of the stated time periods. CDE will sign a formal agreement before the Contractor destroys any materials.
- Electronic images of student responses used for scoring will be archived and retained in a vault-like electronic environment. To prevent the loss of data, vault storage will be mirrored at two locations. When requested, and as a cost option, electronic images will be delivered to Colorado in an agreed-upon format at the end of the Contract. For the Colorado student assessments. The Contractor will employ both physical security—restricted access—and monitoring of the Contractor's computer facilities—environmental control, power conditioning, backup, and monitoring.
- The Contractor's security measures shall also include fully redundant hardware and secure offsite storage of daily and weekly backup data. If examination materials or data are stored off site, they shall be stored at secure locations, including bank vaults. The Contractor shall have fireproof vaults on premises for storing computer data disks on a short-term basis.

Upon expiration of the aforementioned time periods, the Contractor must request CDE's permission to destroy the stored material before doing so.

A.5.5.d. <u>Disaster Recovery</u>. The Contractor's system shall archive assessment data, and all archived data will be retained for the life of the Contract plus 12 months, but no less than seven years.

The Contractor shall mitigate customer risks and recover normal operation of critical infrastructure in the event of a serious threat or disaster. The Contractor's duties shall include disaster recovery processes for hardware and software to store and/or deliver any contracted products for CDE over the life of the Contract. The Contractor's planning shall be aligned with British Standard (BS) 25999-1:2006, an internationally recognized standard governing business continuity management. The Contractor's plan for business continuity and risk mitigation shall include the following core components:

- Ordering and prioritization of key process restoration over a two-week interval in the event of a disaster or interruption
- Backup and recovery of critical data and resources, including IT infrastructure, facilities, and operational equipment
- Organization of defined incident management teams – which have completed Federal Emergency Management Agency (FEMA) Incident Command System training – to provide standardized, structured management of the response to any anomalous incident that affects the Contractor's business operations

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- Defined pandemic response protocols that plan for the possibility of reduced staff availability, reduced access to facilities, and issues with the Contractor's suppliers of goods and services
- Recovery planning with the organization, actions, and procedures necessary to evaluate and recover vital technology applications at an alternate off-site data center
- Annual disaster recovery exercises for all assessment systems that are dependent on the Contractor's data center
- Periodic testing and review of incident management and business continuity plans and processes

The Contractor shall plan for and implement a formal test of the tape backup and restoration process. Any failures shall be documented and retested until there is a successful restoration of all services, components, and systems. Testing shall occur at least once a year. The Contractor shall be committed to the continued operation of a Data Security and Business Continuity Department responsible for ongoing development and maintenance of business continuity planning.

The Contractor shall retain data for no less than seven years. The Veritas NetBackup software with multiple IBM tape libraries and Data Domain Disk Backup systems will be used to replicate data in near- real time to the Contractor's offsite disaster recovery systems, and to maintain continuous data availability and minimal restoration required in the event of catastrophic failures. Backups of all course content shall be performed daily, weekly, and monthly via a periodically audited backup schedule. Test restores shall also be performed periodically to verify that backups are successfully occurring. On the tape rotation schedule, the tapes will remain in the library for up to one week, in the Contractor's corporate/pre-production data center fire proof safe for up to three months and are then archived with Iron Mountain for long term storage. Data retrieval time frames shall be based on the amount of data to be restored and the level of difficulty.

In case of an interruption of power, all production data centers shall have multiple Uninterruptible Power Supplies (UPSs), air conditioning units, and diesel generators. ViaWest shall maintain fuel contracts with multiple local vendors to verify that the facilities can run indefinitely on generator power. In addition, the ViaWest downtown Denver and Arapahoe data centers have connections to two separate power grids within the facility and can be switched from one to another in an extended emergency situation.

Concerning personnel management in a critical situation, the Contractor shall maintain multiple tiers of support with a minimum of two personnel assigned for every key role and succession plans for primary management roles. In addition to having the Contractor's personnel on site at the primary production data center, the Contractor shall also have direct access to senior ViaWest Network Operations Center personnel, senior ViaWest engineering staff and all levels of ViaWest senior management staff 24/7/365.

CDE shall have final approval of the disaster recovery solution.

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A.5.5.e. <u>Verification</u>. The security barcodes that have been applied to outbound documents and assessment materials shall be used to quickly account for the return of materials following test administration. As districts return their materials, the Contractor will quickly begin the verification process and provide daily reports showing district returns and any discrepancies within returned materials to the program management team. The program manager will then keep CDE informed on a district-by-district basis with daily updates. A report shall be provided to CDE within five working days of the final date for receipt of post-assessment materials by the Contractor. The report shall include verification that <u>all</u> secure materials have been accounted for. The Contractor shall notify districts of discrepancies and shall work with them to resolve the discrepancies. Should there be no resolution, the Contractor shall notify CDE and work with CDE to take the necessary steps with the district in question. A final security report reporting that all secure materials have been accounted for shall be provided to CDE within one week after materials have been resolved with the Districts.

A.5.6. <u>Test Monitoring</u>.

A.5.6.a. <u>Fidelity to Test Administration and Security Procedures</u>. The Contractor shall provide district and school personnel with procedures for monitoring the secure administration of the test. Workshops and training shall include reinforcement of all security measures and indoctrination on why those measures are of value. Security verification forms for all district and school personnel who will be directly involved in handling test materials and/or administering the tests will be included. Additionally, the Contractor shall work with CDE to develop a student questionnaire related to the test environment and procedures used during testing. The Contractor shall also include security verification forms for all district and school personnel who will be directly involved in handling test materials and/or administering the tests. Section A.9.14 provides details about the data forensics analyses that will be performed by the Contractor.

The Contractor shall develop monitor checklists with CDE's review and approval. The monitors will work closely with the Contractor's management team, noting testing processes and any irregularities, and shall provide results to develop reports that will be provided to CDE within the specified testing period. The Contractor shall assume all responsibility for costs for the monitors and preparation of the reports.

Audit reports for each school shall be developed and should include the audit scope (numbers of test sessions/administrators observed, etc.). Audit results may include, but are not limited to, positive practices, nonconformities, and any areas for concern. In the event that a monitor reports a concern that could be interpreted as a breach of security, the Contractor shall quickly notify CDE and provide the monitor's report. Monitors will not interrupt or interfere with the administration; they will simply notify us what they have observed that may be questionable. CDE shall determine conduct any follow-up investigation and determine any course of action.

In addition, the Contractor shall compile issues and questions brought to the attention of the Contractor by CDE, DACs, and others. This compilation should

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inform discussions regarding which procedures may need to be clarified or enhanced in future years.

The Contractor shall provide assistance and support to CDE in strengthening Colorado's overall security procedures. This may include confirming that state-of-the-art processes, policies, and materials are being employed for the new state assessments.

A.5.6.b. <u>Reported Violations of Administration and Security Procedures</u>. If a DAC contacts either the Contractor's program or customer service team to report potential administration or security violations, the Contractor shall quickly notify CDE and shall also inform the DAC to immediately report any incidents directly to CDE.

A.6. Web-Based Online Test Delivery System

A.6.1. <u>Work Plan</u>. The Contractor shall provide Colorado with online testing services via its TestNav online solution in accordance with the schedule provided in Exhibit B.

A.6.2. <u>Transition to Online Testing Plan</u>.

A.6.2.a. <u>Online Assessment Implementation Plan</u>. The Contractor shall assist the districts in facilitating a live test of the infrastructure, using a "dummy test" with mock content that approximates the true size of the final test content. The Contractor shall determine through an infrastructure trial that Districts and schools can employ the Training Site area of PearsonAccess™ to log in via mock student credentials. All aspects of the local infrastructure shall be at a full state of readiness prior to administering the first live online testing. The same test administrators (proctors) for the Infrastructure Trial shall participate in the live assessments.

A technology consultant from the Contractor shall work directly with CDE to guide the implementation of any transition strategies. The Contractor's Colorado-based technology consultant for this program shall guide CDE and Colorado districts and schools through the many aspects of the transition from paper to online testing. The consultant shall be responsible for planning the transition process with CDE and overseeing its implementation.

A.6.2.b. <u>Evaluation of Readiness for Online Assessment</u>. The Contractor shall assist in facilitating the annual evaluation of the capabilities of Colorado's district computers and networks to determine readiness for online assessment. The Contractor shall provide comprehensive and user-friendly system utilities for districts to test and verify technology, hardware, and software to determine that the computer delivery method can be implemented. The Contractor shall work to determine that districts in Colorado are able to quantify bandwidth and plan allocations during testing periods using the Contractor's tools. The Contractor's system tools shall provide technology professionals sufficient time to test and adjust their networks. These tools shall be available throughout the year. If the assessment identifies potential problem areas, district IT personnel shall consult with the Contractor's technical support staff. The Contractor shall be responsible for working with the multi-state assessment consortia to implement

and deploy the readiness tool. The tool shall include the Contractor's System Check tool, which will provide technical support staff with information about the following important elements:

- **Configuration for TestNav.** Checks that the computer meets minimum software requirements to successfully deliver tests online.
- **Network User Capacity**. Checks connectivity to the Contractor's servers. If proctor caching is used, it also checks connectivity to the proctor caching server. If there are Internet connection problems or if the Contractor's site is down, this check flags the error. Users can add a proctor caching workstation in the school or district to allow for a faster connection, or delete a proctor caching workstation that is not being used.
- **Testing Volume Calculator**. Allows users to adjust network speed, network usage, and the number of students testing concurrently to find optimal testing performance. If a proctor caching server is not selected, then network capacity is based on the connection speed from the workstation to the Contractor's site. If more than one proctor caching server is selected, the District has the ability to manually direct the system to use the one with the fastest download speed.

The Contractor will be responsible for developing and implementing a plan to evaluate the readiness of Colorado's online schools to administer the online assessments meeting CDE's and the Contractor's security and standardized administration procedures.

A.6.3. Online Testing System.

A.6.3.a. Web-Based Online Test Delivery System. The Contractor shall provide Colorado with online services via the Contractor's proprietary TestNav, a browser-based platform. To support online testing in Colorado's schools with otherwise low-bandwidth environments, the Contractor shall provide for proctor caching.

The test delivery system must function (and be maintained) on a current release of Linux, Windows, and Macintosh operating systems. The Contractor will work with CDE to identify compatibility and security issues of operating systems, devices and other technologies (such as terminal services and other forms of virtualization), as well as the impact to operating systems or devices that are no longer supported by the system manufacturers. Linux support may not be available until 2015. In the event there are Linux machines needed to test prior to spring 2015 that meet the minimum requirements for online testing (1 GHz or faster processor, 1 GB RAM or greater memory, 9.5in or larger screen size, 1024 x 768 or better screen resolution), match the two approved distributions of Linux (Ubuntu 11.10 and Fedora 16), and are needed to administer successfully the test in a district, the Contractor will work with CDE and the district to provide Contractor supplemental machines to the districts to allow online testing.

Accessibility Features for All Students. Separate from accommodations, which shall continue to be delivered on an individual basis subject to approval, accessibility features shall be available to all students as desired by CDE. Content-related tools, such as rulers, calculators, etc., shall be available in a

format that is similar to what students experience during instruction for the assessment. Students shall be provided with opportunities to practice online prior to testing using the tools that will be available during operational administration.

A.6.3.b. <u>Tools and Accommodations</u>.

The Contractor's system will include, but not be limited to, the following tools:

- Navigation tools;
- Highlighter, onscreen writing tool, answer elimination, and notepad;
- Writing tools including cut, paste, copy, undo, redo, font format, spell check and paragraph format among other basic word processing functionalities;
- Calculator tools, including four function, scientific and graphing calculators; and
- Additional mathematics and science tools, including drawing tools, rulers, protractors, compasses, and formula sheets, periodic tables

The Contractor shall deliver accommodations and accessibility solutions for online testing, aligning to interoperability standards, and minimizing cost by using the same production workflow for accommodated and un-accommodated test forms. The Contractor shall utilize the APIP to allow items to be moved between item banks with accessibility features intact. It shall also provide clients with features that extend beyond APIP to more fully serve English learners and students with disabilities.

The Contractor's test delivery interface shall include all information and resources required to make test items accessible to students with a variety of disabilities and language needs. As of FY 15, accommodations will be made available in a form of the test based on the Personal Needs and Preferences profile for each student and include, but not be limited to:

- Visual accommodation tools including magnification, enlarged print, reverse contrast, selection of foreground and background colors, color overlay, and alerts to test takers that alternate tactile representations are available.
- Audio accommodations including text to speech and recorded audio including text within a graphic or table with the ability to highlight portions to be read aloud.
- Language accommodations including Spanish translations, word to word glossaries, and sign language/sign system presentation.

Annually, Colorado and the Contractor will review and agree on an accommodations implementation plan.

The Contractor will be responsible for evaluating the functioning of third-party devices, both plug in and non-plug in that may employ external software, used in Colorado schools. The Contractor will work with DACs, educators of students with disabilities and CDE to determine these third party devices that may allow students with disabilities to access the test. Based upon this feedback from the field, Contractor will review the device specifications. Those devices that appear to meet Contractor technical and security requirements need to be

tested to determine how they may function during the testing experience. Contractor will work with CDE to publish and update as needed a list of approved third party devices. Plug in devices could include alternate keyboard, alternate mouse, keyboard monitors, switch devices, and some alternate and augmentative communication devices. Non-plug in devices that could be used include, but are not limited to, alternate keyboard, alternate mouse, refreshable braille displays, braille note takers, keyboard monitors, switch devices, and alternative and augmentative communication devices. Following Contract execution, the Contractor will provide a list of the devices for which the system has demonstrated compatibility.

A.6.3.c. <u>Online Tutorials</u>.

The Contractor's TestNav system shall support an extensive set of eTools, including accommodations that can be configured at the item level. The Contractor shall make online tools and standalone tutorials available for practice throughout the year to familiarize students with them prior to testing. These tutorials shall be available a minimum of 4 weeks prior to the beginning of testing. Paper-based accommodated forms initial ordering window will not close prior to four weeks after availability of a representative online practice tests, including tools and accommodations that will be available in the associated operational test. For spring 2014, mutually agreed upon practice test item samplers will be provided 4 weeks prior to the close of the initial orders window to fulfill the online tutorial requirement.

A.6.4. <u>Application Testing</u>. The Contractor's quality group shall provide independent verification and validation of the software systems. This group shall report through the Organizational Quality group, which is independent of the Information Technology group. The validation techniques of this group consist of end-to-end testing and product validation.

The Contractor shall engage in end-to-end testing where test cases are executed through the test environment in the same manner that live data will flow through the system. The system shall be validated to confirm that system functions and integration points are performing as intended. When issues are found during end-to-end testing, the Contractor shall document them, fix them, and retest . For the system testing, the Contractor shall create data in the same manner as live data and develop test cases.

Production validation shall occur after the system has been approved by the Quality group. After the Contractor has migrated the software code and configurations to the production environment, live data is processed through the system. The Contractor shall validate a sampling of the first production runs to verify that production data are processing through the systems in the same manner as it was tested.

Each system component shall be made accessible to CDE staff in a non-production environment that comprehensively mimics the production environment such that CDE will be able to conduct its own application tests and be assured that the application test responses represent the exact behavior that will be expected of the application in the production environment. The Contractor shall construct a testing platform for Colorado to use for the purposes of User Acceptance Testing (UAT). In performing the UAT, the

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Contractor shall discuss issues with CDE prior to moving the system into production. CDE shall have at least 5 business days to conduct testing of system components and 10 business days to conduct system-wide tests. District installation shall not be necessary for the solution provided. The Contractor's demonstration of the system to CDE shall occur at least eight weeks prior to the start of online assessment administration.

Any mandatory corrections, those impacting the validity and reliability of the assessment or corrections required due to design outside of the specifications, identified by CDE shall be incorporated by the Contractor before the start of administration. Any preferential changes identified by CDE shall be incorporated by the Contractor if such change will not impact the schedule for release. If such changes will impact the schedule, the changes will be made prior to the start of the following administration. Final approved forms and items shall be available in the Contractor's test delivery system a minimum of two weeks prior to the opening of the test window.

A.6.5. Data Integration and Collection.

A.6.5.a. Data Integration. The Contractor shall support standards-based integration. The Contractor shall work with CDE to define a final version of the integration prior to implementation. Data from the Contractor shall be exported in one or more of the following data exchange formats:

- Standardized XML (Ed-Fi Interchange Format)
- Comma Separated Values (CSV) Format
- Schools Interoperability Framework (SIF)
- ASCII Text Format

A.6.5.b. System Requirements. The Contractor's system shall allow authorizations to be variably assigned to allow authorized administrators to update enrollment information, schedule tests, assign test forms, request additional materials and ancillary services, and view reports and data online. The system shall be firewall, content filter, and caching-server friendly, and tailored specifically for network infrastructures found in K–12 environments. To support online testing in schools with otherwise low-bandwidth environments, the Contractor shall offer proctor caching to reduce demand for bandwidth. Before a test administration, encrypted test content shall be downloaded to a school computer acting as a local test server.

The Contractor shall allow authorized Colorado users to request a copy of the registration file that reflects all changes made to student demographic information online so that the state's student information system can be kept in sync with the data stored by the Contractor. When changes to student data are made online in the Contractor's system, the data may no longer match the state or local student information system. Therefore, requesting a copy of the updated student data shall enable users to compare or update the data. This feature shall also enable Colorado users to download large numbers of students; make mass changes to demographic, group, or test assignment data; and upload the file again to automatically update the Contractor's online database. The Contractor's system shall allow student data to be updated before, during and after testing. The data include student information and information about a student's test, which can contain accommodation codes. Details of information

that will be collected shall be agreed upon during the requirements-gathering process.

A.6.5.c. <u>Data Collection Protection Features</u>. TestNav shall be able to tolerate interruptions in Internet service without loss of student data. Designated response file save locations shall be specified by the customer. Two designations can be made—a primary response file location and an alternate response file location. If a student's workstation is unable to transmit responses to the testing server during a test, the TestNav Early Warning System (EWS) shall save the student's responses to an encrypted backup file so that the student may either continue testing or exit the system without losing data. This activity occurs in the background while the software continues to provide test questions to the student. When the network connection is reestablished, TestNav shall upload the student's saved responses to the testing server. Successfully uploaded encrypted response files shall be automatically erased.

As a further precautionary measure, when the Early Warning System detects a potential problem with the designated "save" location, instructions shall appear on-screen for the test monitor to create a valid "save" location. If a student exits TestNav (either inadvertently or intentionally) before completing a test, that student shall not be able to continue testing until an authorized user authorizes the student to resume the test. When the student re-enters the test, the student shall be returned to the first unanswered question.

A.6.5.d. <u>Access to Data Collection System</u>. The Contractor shall provide data collection services to Colorado via Contractor's proprietary PearsonAccess™, a solution that provides an essential suite of tools for managing and coordinating activities for Colorado's student assessments. PearsonAccess™ —and the Contractor's staff who supports it—shall provide Colorado with flexibility to exchange and maintain data in a secure manner and to maintain open communication throughout online and/or paper-based testing cycles.

Colorado shall have a secure single sign-on solution to perform assessment related tasks. The Contractor's web access management solution shall be roles-based; it shall allow or deny access based on definable user attributes. PearsonAccess™ shall be configured according to Colorado requirements and access privileges for individuals or groups of users at the state, district, and school levels shall be determined by Colorado.

The PearsonAccess™ security module shall provide administrative user authentication and authorization services. Colorado shall have control over certain administrative security features, such as the following:

- Who is allowed to access the system
- What level of the system (state, district, school) each user can access (available levels will be configured to match the naming convention used by Colorado)
- Which administrative functions (enrollments, student data management, order tracking, viewing reports, etc.) each user is permitted to access based on their role

Available roles and their associated permissions shall be configured according to Colorado requirements. Each authorized user of PearsonAccess™ shall be given a unique user name and password. No secure area within the system shall be able to be accessed without proper authorization. Additionally, each user shall be authorized to access only certain data records within the system (as described above with respect to user levels and roles). Initially, the Contractor shall assign a user name and password to selected state-level individuals as specified by CDE. When accessing the administrative system for the first time, the user must agree to a confidentiality statement (customized by Colorado) and change the randomly generated password. Once inside the system, initial users will be able to establish new administrative user accounts by creating user profiles.

A.6.6. <u>System Reliability and Mitigation Experience</u>.

A.6.6.a. <u>Information Technology</u>. On a case-by-case basis, the Contractor's representatives shall review Colorado policies and standards related to technology use and security. The Contractor reserves the right to negotiate on potential points of divergence and to determine with CDE a workable compromise as necessary. The Contractor's systems shall be monitored seven days per week, 24 hours per day. The Contractor's staff shall continually collect and analyze metrics that indicate capacity and performance from the perspective of the students, teachers, and administrators who use the system.

The Contractor's comprehensive system performance monitoring tools and procedures shall include an automated systemic monitoring (i.e., operating system, CPU use, memory use, network health, etc.) performed by data center host and the Contractor—24x7, an automated and continuous database-level monitoring by the Contractor with proprietary monitoring tools that provide early warnings on performance and capacity thresholds, an automated external monitoring (from geographically dispersed locations) performed 24x7 to measure performance and availability from a client perspective, and end-to-end diagnostic monitoring providing performance measurement of all application and database components.

To protect Colorado's data, the Contractor shall perform full server backups twice a week (Sunday/Wednesday) and incremental backups to tape daily. The Contractor shall store tapes in a secure, off-site location. The Contractor's database servers shall store transaction logs on remote storage every 15 minutes to allow for more granular restore capabilities. The Contractor shall restore data for up to one year. The Contractor shall use backups to recover files and data in the event of catastrophic machine failure. The Contractor shall also make full back-ups before any major release of the system so that the state of the system prior to the release can be reverted back to if necessary.

A.6.6.b. <u>Cyber Security</u>. The Contractor agrees to maintain network system and application security that, at minimum, conform to State of Colorado Security Policies and current cyber security standards set forth and maintained by the Center for Internet Security. The Contractor shall design and maintain its networks and applications in accordance with international standards, best practices, and company security policies based on the ISO 27001 standard. The

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Contractor shall work to maintain the confidentiality, integrity, and availability of the overall systems that will support CDE requirements.

A.7. Scanning and Scoring

A.7.1. <u>Work Plan</u>. The Contractor shall adhere to the mutually agreed upon detailed schedule that outlines the tasks and durations for each year of the Contract. The draft schedule is included in Exhibit B.

The Contractor shall provide accurate and reliable scoring for CDE and its stakeholders. The Contractor's approach combines established methodologies with innovative strategies to increase scoring efficiency while maintaining scoring quality.

The Contractor's scoring plan for non-machine scored items for the Colorado summative assessments shall include the following:

- Range finding in Denver, CO, or another mutually acceptable location in Colorado, to identify responses for the anchor, practice, and qualification sets
- Training for human scorers that uses training developed by the Contractor's experienced professional scoring content staff and reviewed and approved by CDE
- Quality monitoring and management of the scoring process, which includes the Contractor's ISO- certified scoring processes
- Use of a set of scoring tools and procedures to achieve consistent, reliable scoring
- Artificial intelligence (AI) and human scoring of computer-administered student responses, combined with human scoring for five percent second scoring
- The use of AI must provide for equity across student populations supported by research
- Scoring engine that is trained using responses scored by the Contractor's seasoned scoring staff
- Using the Contractor's distributed scoring system for AI item responses that require human intervention

Estimated quantities of items and scoring approach are included below.

Colorado Student Assessment Operational Performance Scoring **Quantities and Specifications 2013-14**						
Content	Grade	4	5	7	8	High School
	Student Volume	63,819	63,327	60,921	59,667	58,247
Science	(0-2 points) Total Constructed Response (CR) Items*		4		4	4
	(0-2 points) CR Machine Scored		0		0	0
	(0-2 points) Human or Artificial Intelligence (AI) Scored**		4		4	4
	(0-3 points) CR Total CR Items*		3		3	3
	(0-3 points) CR Machine Scored		0		0	0
	(0-3 points CR) Human or AI Scored**		3		3	3
	Technology Strands (5 strands with 2 CR's per strand, 10 total CRs)***		10		10	10
	Technology Strand CR Machine Scored		0		0	0
	Technology Strand CR Human or AI Scored		10		10	10
Social Studies	(0-3 points) CR Total CR Items*	7		7		7
	(0-3 points) CR Machine Scored	0		0		0
	(0-3 points CR) Human or AI Scored**	7		7		7
	Performance Events (2 per student with an average of 3 CRs per Event, 6 total CRs)*	6		6		6
	Performance Event CR Machine Scored	0		0		0
	Performance Event CR Human or AI Scored**	6		6		6

*For paper accommodations all these items will be human scored

**Distribution between human and AI scored items will be determined based on the number of items the AI system has demonstrated ability to scoring reliably, including across student sub-populations.

***For paper accommodations, these items will be replaced with maximally comparable non-simulation based SRs and CRs.

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The Contractor will propose procedures and specifications for determining if an item should be used operationally and whether it can be scored with AI or will require human scoring.

A.7.2.   Constructed Response Scoring Materials.

A.7.2.a. Range Finding Meetings (Educator Meeting). The Contractor shall initiate a teleconference with CDE staff to discuss program requirements and to plan critical events, including range finding. The Contractor shall develop a complete range finding plan, documenting their assumptions, roles and responsibilities, schedule, the number of items to be reviewed, the configuration of range finding sets, committee participants and agendas, and logistics, and submit this to CDE for review and further input.

Once the range finding plan is complete, the Contractor will begin preparing for meetings with the state content team. The initial meeting will be for the stand-alone field test, thereafter the range finding meetings will be for the embedded field test items. Contractor's scoring project manager and scoring specialists will prepare the scoring directors for participation in the range finding process, including reviewing security requirements and the comprehensive range finding plan. Prior to the range finding committee meetings, the Contractor's scoring directors will become thoroughly familiar with materials and guidelines, including scoring guides, previous training sets, field test materials, and any other supporting literature.

Contractor's scoring and content staff will review randomized responses from the stand alone and embedded field test to identify qualified candidates to take to range finding. Responses will represent the full range of score points and will be in proposed sets for presentation to the range finding committee. Each student response will be assigned a unique number for range finding purposes, and a corresponding log will later be used to record important comments and decisions. Scoring directors will sort and pre-score documents. The scoring directors will arrange these responses into range finding sets and will photocopy the appropriate number of these sets for members of the range finding committee. The first range finding meeting will be for the one-time stand-alone field test; thereafter the meetings will be for embedded field test items and will be held each year. These range finding meetings will occur prior to field test scoring. The purpose of these range finding meetings is to define the rubric score points for scoring the field test items and to determine whether the rubrics need revision prior to field test scoring. These range finding meetings will also be used to develop scorer training materials for field test scoring training. If the range finding committees determine that an item is not eliciting the expected range of responses, Contractor will bring that item to the attention of CDE to decide if it should be removed from the item pool.

The Contractor shall conduct a three day range finding meeting annually for each grade and subject, in Denver, Colorado, to identify student responses to be used for training purposes. Elementary and Middle School committees will convene each summer. High School committees will convene each winter. For each grade, there shall be 5 educators participating for science and 5 educators participating for social studies for a total number of 30 committee members. These participants shall review and score enough student responses per grade,

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per score point, to generate enough options to be used as anchor, training, and calibration responses for field test scoring, keeping in mind that these responses and their scores will be also be used for operational scoring and the training of the artificial intelligence scoring engine.

Contractor's scoring management staff and scoring specialists as well as Contractor's content specialists will attend range finding to assist the panel during the meetings. As facilitators, Contractor will guide, provide feedback, and offer information regarding the types of issues scorers are likely to encounter. Contractor will lead discussion between participants until agreement on the final score for each item response is satisfactory to the group. Contractor will provide a process that leads to fair, accurate, and reliable scoring of student responses.

The range finding committee shall review the following:

- The summative assessment rubrics, as well as appropriate documentation of standard evaluation criteria that facilitate a common understanding of the standards and intentions of CDE.
- Copies of student responses, determining and recording consensus scores and, where appropriate, making recommendations for the possible placement of papers within training sets, in order for the Contractor to effectively construct scorer training.
- After Year 1, the scoring procedures and rubrics, training papers from previous administrations, and previous scoring decisions, so they can gain a common understanding of standards and a consistency of scoring.

The Contractor shall be responsible for documenting decisions of the range finding committee and recommendations of CDE. The Contractor shall keep a formal log of papers discussed, recording scores assigned along with any recommendations for the placement of papers in training sets. This log will serve as a historical record for each training paper.

The Contractor's scoring directors shall note the comments of committee members on the scoring of particular papers, as these comments may be useful in the training of scorers and provide benchmark points for discussions in subsequent years that will help to maintain longitudinal consistency. The Contactor shall deliver the log to CDE for confirmation that the committee decisions and official scores were accurately recorded. The Contractor shall submit proposed anchor and practice responses and proposed training annotations to CDE for review and approval prior to training. The Contractor shall maintain data and content security throughout the preparation of the range finding materials and during the meetings themselves. The Contractor shall account for range finding materials at the conclusion of each session and archive or shred excess photocopies and notes from each session, as well as delete or archive unneeded electronic copies.

CDE shall provide input to the range finding plan and participate in the range finding.

A.7.2.b. <u>Anchor Validation Meetings (Educator Meeting)</u>. Given that all items will be scored during field testing with the expectation that AI scoring may be used in

operational years, anchor validation will not be included in this program except under circumstances where it is mutually agreed between the Contractor and CDE that a clarified rubric may result in more reliable scoring.

A.7.2.c. <u>Scoring Decision Guide</u>. The Contractor's ISO-certified Quality Management System contains a Scoring Decision work instruction and documentation form, which the Contractor shall tailor for use on the Colorado summative assessment. The Contractor shall maintain a log of scoring decisions that includes decisions on how to address unusual situations or questions that arise each year. CDE shall review and approve updates to the scoring decision guide, scoring rubrics, and scoring rules before they are used in scoring operational assessments. The Contractor shall make the scoring decision guide developed and used for scoring released items available to classroom teachers each September.

A.7.3. <u>Scanning of Assessment Documents and Scoring of Selected Responses</u>.

A.7.3.a. <u>Scanning of Student Responses</u>. The Contractor shall use its scanning technology to scan and capture data on all Colorado summative assessment documents for both multiple-choice and constructed-response items from the paper-based test forms. The Contractor will propose procedures for assuring the accurate imaging and scanning of the document, as well as editing procedures to assure the accurate recording of the student responses.

A.7.3.b. <u>Scoring of Selected Response Items</u>. The Contractor's validation team shall prepare test plans used throughout the process. The Contractor shall verify multiple-choice scoring for both paper and online delivery using score keys. Test plan preparation shall be organized around detailed specifications for the following areas:

- Raw score validation (e.g., score key validation; objective/strand/domain scoring, field test non-score; double-grid combinations; possible correct combination, if applicable; out-of-range / negative test cases)
- Derived scoring (e.g., scaled score, performance level, and percentile score validation)
- Matching (e.g., validation of high-confidence criteria, low-confidence criteria, cross document, external or forced matching by customer; prior to and after data updates; extract file of matched and unmatched documents)
- Demographic update tests (e.g., verification of data extract against corresponding layout; valued values for updatable fields; invalid values for updatable / non-updatable fields; negative test for non-existing record or empty file)
- Aggregation (e.g., tests of summary report data and field-level calculations; inclusion and exclusion criteria; minimum and maximum values for reporting categories; population subset confirmation; effects of attemptedness on aggregation outcomes).

A.7.3.c. <u>Imaging of Short Constructed Response, Extended Constructed Response and Performance Event Items</u>.

The Contractor shall capture information in its image scanning system in such a way that all images of documents belonging to a student can be accessed later as a complete unit or record. In the Image Capture Environment (ICE), constructed responses will be clipped, labeled, and presented to scorers for scoring.

Demographic data is included with the student's response data. While the student remains anonymous to the scorer, the labeling of the clip shall allow it to be tied back to a specific student and the score included in his/her record.

A.7.3.d. <u>Resolution of Student, School and District Data during Scoring</u>.

The Contractor shall perform a data editing process to verify that information in the database is complete during a first production run (test) of documents with live student data and after scanning. The Contractor shall examine data for omissions, gridding, and other inconsistencies likely to be an error and accounted for in the editing rules.

After each stage, the Contractor shall perform hand-checks of the output file against each answer document to verify the scanner is correctly capturing marks. A formal sign-off will be required, validating that program output matches expected results before any further scanning takes place. The Contractor's editing staff and computerized editing system shall scrutinize all student, school, and district data collected. For each batch of answer documents processed, the Contractor shall perform edits on the previously scanned information. The Contractor and CDE shall mutually agree on the types of edits that are made and documented in the project specifications.

The Contractor shall collaborate with CDE to resolve discrepancies among student, school, and district data. Colorado has a unique student identifier system in place that will be used for resolution of student data.

CDE shall have the option of using the Contractor's online portal, PearsonACCESS™. The Contractor's online portal shall enable district personnel to make and verify student demographic record corrections in real time, and to receive alerts about questionable information. The portal shall also alert users to possible key entry or transcriptions errors when they occur. Should CDE elect to use the Contractor's solution, PearsonACCESS™ shall be configured to incorporate a Colorado-supplied set of data requirements with input from the Educational Data Advisory Committee (EDAC), the Contractor, and Data Pipeline staff members. These data edit rules shall define specific conditions that exist within a student test record, and may include single-field edits (e.g., invalid date of birth) and simple cross-field edits. In the event that a student test record contains a condition that does not agree with the defined data edit rules, a data alert message shall be generated and displayed on the PearsonACCESS™ screen. Users shall be able to resolve the alert conditions displayed online so the student information is correct prior to final reporting.

As paper testing volumes decrease, the comprehensive system will combine paper and online to provide a single resolution process. By enabling districts to clean up all their data in one location online, the overall process will be more efficient and Colorado can better monitor and manage completion status. Colorado will be able to provide final sign-off of the student demographic information prior to Contractor proceeding with reporting.

Should Colorado decide to use its own system for making student biographical data corrections rather than using PearsonAccess™, the Contractor shall support

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CDE during this process by providing student biographical data files prior to field review and by accepting corrected student biographical data files from CDE after field review.

A.7.4. <u>Scoring Center Procedures and Scoring Processes</u>.

A.7.4.a. <u>Scoring Center</u>. The Contractor shall score the operational items requiring human scoring of the summative assessment though distributed scoring, which is an effective, secure, Web-based scoring model that incorporates several innovative components, including the following:

- Online training and qualification will be comprehensive and item-specific.
- Scorers will be trained and qualified using comprehensive, self-paced online training modules which allow them to manage their training more efficiently.
- An extended-hours Scoring Support Center (SSC) staffed with the Contractor's scoring directors and scoring supervisors who will provide quality monitoring, feedback, and user support via email and telephone service will be available.
- The Contactor's scoring system will include a comprehensive set of scoring and monitoring tools.

To score Colorado summative assessments, there shall be no restrictions on scorer location. Restrictions based on employment in Colorado schools may be imposed by CDE. In order to access the Contractor's distributed scoring system, scorers must authenticate to the system through a secure internet portal. Additionally, as stated in section A.7.4.c, the Contractor shall take steps to protect the confidentiality of student responses.

For operational scoring, scorers shall be trained via online training. This training, as described in section A.7.4.d, shall include review of anchor sets, scoring practice sets, and qualifications sets prior to scoring live responses. Additionally, the Contractor's distributed scoring system shall provide built-in tools that allow remote monitoring of scoring.

CDE shall have appropriate access to the Contractor's scoring system to monitor the scoring process. The Contractor recommends item-level training and scoring to promote scoring quality. Scorers shall be trained by scoring on a particular item at a time. They shall become experts on that item, on the range of student performance on that item, and on applications of the scoring rubric. The Contractor's in-house instructional designers shall work side-by-side with scoring content experts to create illustrative training sets. The Contractor shall monitor scorers as described in section A.7.7.a.

A.7.4.b. <u>Scoring Staff</u>. Scorers must have at least a bachelor's degree. The Contractor shall work with CDE to further refine scoring staff qualifications before the Contractor's staff begins serving in their respective roles. In addition, the Contractor shall provide, in writing, the credentials and qualifications of the scorers, table leaders, and scoring supervisors, for CDE's approval. CDE shall approve the assignment of the scoring supervisors. All scoring staff shall pass an initial criminal background check paid by the Contractor. As indicated in the

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Q&A document, this background check will include a Social Security Trace, National Criminal Database search, and National Sex Offender search.

The Contractor shall prioritize staff assignments based on experience with assessments similar in size and scope to Colorado's and shall pay careful attention to the candidate's background and his or her fit with the requirements of the summative Assessment. The key scoring staff that shall support the scoring requirements of the Colorado summative assessment are included in the personnel list in Attachment 2.

A.7.4.c. <u>Scoring Confidentiality and Security Procedures</u>. The Contractor's scoring system shall provide secure transmission of data at login and during active sessions through the use of industry-standard Secure HTTP (HTTPS) and Secure Socket Layer (SSL) technology. The Contractor shall also follow standard access, password, and user identification protocols when authenticating users to its digital scoring system. Scorers shall be trained on security protocols. All scoring staff shall be required to sign a Confidentiality Statement. The Contractor's confidentiality agreement shall indicate that the individual will not provide any assessment information or materials to other individuals or entities, including but not limited to use as test preparation materials. CDE shall have and maintain the right to modify the agreement as needed to protect student information. All student responses shall be distributed anonymously, with no way for a scorer to link a student's demographic information to a response.

A.7.4.d. <u>Scorer Training</u>. The Contractor's in-house instructional designers shall work side-by-side with scoring content experts to create effective training sets. The Contractor shall consult and collaborate with CDE staff members throughout the process of response selection and training design. The Contractor's scoring directors shall attend the range finding meetings, create the training materials, and oversee scoring. To build training sets, the Contractor's scoring directors shall carefully review detailed notes and records from the range finding committee meeting, using the responses designated by the committee and selecting additional suitable student response samples as needed to build training sets.

Once the anchor, practice, and qualification sets (qualification sets for operational items only) have been refined, they shall be submitted to CDE for review and approval. After approval, scoring directors shall compose annotations for the operational items for each response in the anchor and practice sets. These annotations shall use the language of the rubric and specific text from the student's response to demonstrate the connections between the rubric and the content of the response. The annotation shall explain the reasons for the response receiving a certain score point and shall demonstrate why it is a helpful training response.

The Contractor shall design the online training modules so that content must be viewed prior to moving to the next screen or module. Additionally, the Contractor shall build interactivity into the modules to target and reinforce key concepts and important scoring decisions.

To achieve quality scoring for the Colorado summative assessment, the Contractor's scorers shall be intensively trained. Prior to scoring responses, scorers shall be required to complete a multi-set training course, described in the following figure.

Module	Content
Scoring for the Contractor	Will include an introduction to the Contractor; train scorers on appropriate policies and confidentiality requirements; and educate scorers on the philosophy of scoring, and the difference between scoring responses and grading student work.
Contractor's Scoring System	Will provide scorers with training on how to submit scores and practice scoring in the Contractor's scoring system.
Scoring the Project	Often defined at the subject level for each project, this module will provide project-specific training, including an overview of the project, details on who will be supporting them during the training and scoring process, and potential reader bias they may encounter while scoring.
Scoring the Item	Item level training, this module will provide scorers with the specific requirements needed to accurately score the item they are assigned. Item-specific content includes level-setting the scorer on the age of and resources available to the respondent, the prompt, rubric and annotated anchor papers.
Practice Scoring	Will provide scorers with practical experience applying the scoring guidelines to sample student responses and includes feedback on their scoring.
Qualification	Will test scorers on the retention of the training. In order to qualify for operational scoring, scorers shall achieve accuracy rates on at least one of the qualifying sets consistent with the interrater agreement requirement for operational scoring as specified in A.7.7.a.
Contractor's Scoring System Part Two	Will provide scorers with training on additional functionality of the scoring system, including how to communicate with supervisory staff and use of self-monitoring tools.
Before You Score	Will present advanced training on project-specific handling of responses that don't appear to meet the criteria of the rubric.

A.7.5. <u>Human Scoring</u>. The Contractor shall identify the number of staff needed to meet reporting timelines in each contract year. The Contractor's scorers must complete training and qualification prior to active scoring. The scoring system shall prevent scorers from advancing to scoring without successfully completely the training curriculum for each item they are to score. Training shall include responses from, and the appropriate way to approach scoring for, different subgroups. While training will only be done based on English responses, the Contractor will be responsible for also scoring Spanish responses and any other languages the Contractor indicates it has the ability to score. Other responses will be coded to indicate foreign language and will be scored as incorrect.

A.7.6. <u>Artificial Intelligence Scoring</u>. The Contractor shall provide both human and artificial intelligence scoring. Distribution between human and AI scored items will be determined

based on the number of items the AI system has demonstrated ability to scoring reliably. The Contractor's automated scoring technology, IEA, shall measure not only the grammatical correctness of a response, but also its content, completeness, organization and support with the appropriate use of evidence. The use of AI must provide for equity across student populations supported by research.

Contractor shall use IEA to score online administered items when possible, with a five percent second human read for quality control as well as human scoring of outliers for all automatically scored items (outliers are responses that are unique and flagged by the system for human rating).

- Contractor performance scoring staff will score a sample of at least 1250 responses per prompt for short constructed response items, extended constructed response items and any constructed responses related to performance events.
- IEA will be trained to score like human scorers based on a training set of scored student responses.
- The responses used to train the engine will be 100 percent double-scored by human scorers and will receive final scores.
- Once trained, IEA's performance on each prompt will be compared against human scoring performance
- When IEA's performance is not comparable to human performance on a given prompt, that prompt will be scored operationally using all human scoring.
- When IEA's performance is comparable or better, it will be used to score all responses, with five percent human scoring. In addition, any responses that IEA cannot confidently score will be directed to a human for scoring.

Before scoring a student response, IEA will analyze the response to determine the confidence with which it can score it accurately. IEA will use a variety of checks to make this determination based on characteristics of the responses on which it was trained and experience with a variety of both good- and bad-faith responses. Responses that appear to be off-topic, not English, or highly unusual or creative will be directed to a trained human scorer through the Contractor's distributed scoring system.

A.7.7. Additional Scoring Considerations.

A.7.7.a. Reliability and Validity of Scoring Procedures. To maintain ISO 9001:2008 certification, the Contractor shall utilize a quality system to maintain consistency and uniformity throughout the scoring process and shall be routinely audited by an external auditor. The Contractor's processes shall be standardized, repeatable, documented, and followed. In addition, once responses have been scanned, they will be scored in a randomized order.

In collaboration with CDE, the Contractor's scoring project manager and content specialists shall establish project specific quality management measures. The processes shown in the following table include, but are not limited to, calibration, inter-rater reliability (IRR), validity, and frequency distribution.

Monitoring and Managing Scoring Quality	
Second Scoring	The Contractor's scoring staff shall closely monitor scorer performance and provide inter-rater reliability statistics. There shall be a 5% second scoring rate for operational scoring. Field testing scoring will employ a 100% second scoring rate. Means of determining the final score will be mutually determined by CDE and the Contractor.
Backreading	The Contractor's supervisory staff shall review the scores assigned to individual student responses to confirm that the scores were correctly assigned and to give customized feedback and remediation to scorers. There shall be a 5% backreading rate with higher rates for scorers identified as requiring remediation until they meet scoring expectations or are dismissed from the project. Means of determining the final score will be mutually determined by CDE and the Contractor.
Calibration	The Contractor shall provide continuing training and reinforce the scoring standards. Calibration proactively promotes accuracy by exploring project-specific issues, score boundaries, or types of responses that are particularly challenging to score consistently.
Validity	The Contractor shall verify that scorers are applying the same standards throughout the project and guard against scorer drift and ultimately group drift.
Validity as Review	Select validity responses that are annotated and flagged for review. These responses shall be sent automatically for review if the scorer does not assign the correct score, and aid in preventing scorer drift.
Scorer Exception Processing	The Contractor's project managers shall define intervals at which their scoring system will check scorer validity exact and adjacent agreement. If scoring is below pre-set standards, the system interrupts their scoring so they may work with a scoring supervisor, review anchor papers, or take other steps to improve scoring. This process prevents scorers from continuing to score if standards are not maintained.
Frequency Distribution	The number or percentage of scores assigned at each score point of a rubric and is another key metric tracked and managed during scoring. Anomalous trends are examined in conjunction with validity statistics to determine what actions to take.
Inter-rater Reliability	Allows scoring supervisors and scoring directors to monitor individual and group performance. Scoring experts can target individuals for increased backreading and feedback, and if necessary, retraining.
Retraining and Resetting Scores	Scoring directors assess a scorer's performance by reviewing statistics for inter-rater reliability, validity, backreading, and frequency distribution to diagnose areas of concern. If an underperforming scorer remains below the established standards for accuracy, the scorer shall be released from the project and his or her scores reset and redistributed.
Reporting and Data Analysis	The Contractor's image scoring system automatically captures and tracks score data. Reviewing up-to-date scorer performance statistics shall enable the Contractor to quickly identify particular scorers whose performance falls outside of group norms while also keeping close track of the group as a whole.

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Monitoring and Managing Scoring Quality. Colorado summative assessments will be managed through a uniform set of scoring tools and procedures.

The Contractor shall meet the 95% exact plus adjacent agreement requirements for the 2-point, 3-point, 4-point, 5-point and 6-point items. The Contractor will strive to meet the exact agreement rates for the 2-point and 3-point (90%), and 4-point (78%)items if applicable. The Contractor will contact CDE when there is risk of not meeting the exact agreement rates as follows: 2-point at 80%, 3-pont at 70% and 4-point at 65%. An appropriate corrective action plan will mutually be determined and implemented.

A.7.7.b. <u>Procedure for Unusual Responses</u>. The Contractor shall train scorers to be aware of student responses indicating potential need for intervention. Alerts include child in danger of violence, severe depression, or abuse or responses that indicate a testing irregularity may have occurred. The Contractor shall follow its standard process for alerting responses that may require intervention by testing or school officials. Scorers shall receive initial instruction during training regarding alerts and will be trained to send such responses to a special alert queue in the scoring system, even if they are unsure whether intervention is required. Responses thought to indicate the student is a danger to him/herself or to others, is threatening property damage, or is in danger from some person or situation shall be sent to the queue.

The Contractor shall include a brief comment explaining the issue when a response is sent to the alert queue. The Contractor's lead scoring staff member shall access the alert queue, save an electronic copy of the response to a secure server, and completes a standard alert form, which includes a brief description of the issue and the unique identifying number associated with the response. The Contractor's scoring staff shall notify the program team and the program team shall use the tracking information to link the response to the student record. The Contractor's scoring staff shall not make any determination regarding level of risk but rather shall notify and forward any response in question to CDE within 24 hours of discovery by the scorer.

The Contractor's electronic scoring system shall allow other review queues to be set up where scorers send responses for further review, such as off topic papers or papers indicating a test administration issue such as teacher interference or prompting. In each case, scorers attach a text message to the response explaining the issue, and scoring directors access the response and the message to document the issue and contact CDE, as appropriate. The automated scoring system routes unusual responses for human scoring, which often include responses that would typically be alerted by human scorers.

A.7.7.c. <u>Rescoring</u>. The Contractor shall conduct reviews and rescores of open-response items upon CDE request. The Contractor's expert scorers shall review the original student responses in question and the original scores assigned. In each case, the original score assigned to the student response shall be reviewed and compared to the original anchor papers used in training. If the Contractor's expert reviewers determine that the original score assigned was incorrect, the

Contractor's performance scoring staff shall provide a new score, which shall be delivered to CDE.

CDE may also allow districts to request rescoring of open ended responses. If the rescoring shows no change, then the local district will pay the reasonable cost of rescoring. If rescored student work results in a change in a student's score, the Contractor shall pay the cost. Before work begins, the district will need to provide the Contractor with a purchase order for the work. CDE will not be responsible for the fees associated with rescoring of students' responses at district request.

If a district has questions about the accuracy of a selected response score once test reports have been delivered, Contractor will handscore the answer document. The document will be rescored by hand, and the program team will contact the district with the results. In the unlikely event that an answer document has been scored incorrectly, the requesting party would not be charged for the rescore. The Contractor shall provide a plan for how to address the computer-based administered selected response items prior to the first operational administration.

The Contractor shall provide proposed procedures local districts will use to request rescoring prior to the first operational administration, as well as what districts will be charged to rescore student answers. The Contractor shall notify CDE about the number of requests for rescoring, as well as any student scores that have been changed.

A.8. Reporting of Data Files and Summative Assessment Results

A.8.1. <u>Work Plan</u>. The Contractor shall adhere to the mutually agreed upon detailed schedule that outlines the tasks and durations for each year of the Contract. The draft schedule is included in Exhibit B. The Contractor shall use proven tools for collecting Colorado summative assessment scoring and reporting specifications and establishing a baseline for data requirements and preferences. The process of defining detailed Colorado requirements will clarify information such as that in the following table. This list is not exhaustive.

Reporting Requirements	
Requirement Categories	**Description**
General Expectations	
Report Types	Descriptions, purposes, and narrative
Performance Content	Alignment to state objectives and grade level
Federal Requirements	Demographic summary reporting content
Timelines	Scheduling expectations, including scoring and reporting milestones
Business Rules	
Data groups	Attemptedness, suppression, and exclusion
Formatting	Rules for data fields within each reporting
Performance levels	Pass/fail designations and Identification of individual student strengths and weaknesses

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Reporting Requirements	
Requirement Categories	**Description**
Data Analyses	
Item Analyses	Summaries of performance data by test item across student reporting groups
Presentation	
Report Appearance	Graphic display standards and alternate media
Report Mockups	CDE review of mockups for all student-results
Production &	
Report Production	Printing, pagination, sorting, and collation
Report Delivery	Recipients, packaging, and shipping

The Contractor shall work with CDE to confirm its understanding of Colorado expectations. The Contractor shall reference this record of CDE requirements and preferences throughout the activities associated with delivering data analysis and results reporting.

A.8.2. <u>Data</u>. All raw student data shall be provided to CDE by the Contractor.

A.8.2.a. <u>Data Files</u>. The deadline for posting the initial individual student level file for the districts is no later than the first Friday in June, after the initial operational administration and standard setting schedule. For the first operational year for each content area, reporting shall be scheduled to follow the standard setting sessions and establishment of performance levels. The exact content, naming conventions, definitions of data elements, and file type shall be clearly documented and agreed upon by the Contractor and CDE at least three (3) months prior to test administration. The timeframes for reporting following the fall High School administration will be no longer than the spring reporting of the Elementary and Middle School administration.

At the beginning of each new contract year, the Contractor's program requirements analyst shall gather specific data file requirements and work with CDE to establish a reference document to guide future development, quality testing, customer approvals, and delivery. The Contractor shall provide full state data files to CDE. The Contractor shall maintain the proper identification of each student and the accurate matching of each student to test results using the identification number for each student. The data file shall contain all information gathered on each student during the test administration and scoring period including but not limited to:

- School and district name and identification number assigned by CDE designating where the student was tested;
- Responses to individual items; and
- All raw and derived data.

Before generating final-results data files, the Contractor shall present a business sequence flow for CDE review and institute intermediate CDE approval milestones throughout the reporting process.

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The Contractor shall post the results file on its secure website and deliver it to CDE no later than June 30 of each year. However, for the first operational year for each content area, reporting shall be scheduled to follow the standard setting sessions and establishment of performance levels.

A.8.2.b. Data Documentation. The Contractor shall carefully document and execute CDE's requirements and preferences to determine the CDE design and content needs for reports and data files. The Contractor shall develop reports that provide information in a form most useful to recipients. The Contractor shall follow these steps:

Step One: Proposal Requirements. The Contractor's writers, designers, and developers have thoroughly examined Colorado reporting requirements. The Contractor's technology and program teams also have met internally to discuss and determine CDE requirements for student and summary reports.

Step Two: Development of Report Mockups. When the Contractor's teams reach consensus and form a clear picture of the assessment reports, the Contractor's designers shall begin to develop realistic mockups based on the recommendations. The Contractor shall provide full-size sample reports that reflect one standard set of report types.

Step Three: Customer and Internal Requirements. Shortly after signing a contract and before the beginning of every subsequent operational testing administration, the Contractor shall discuss CDE's precise reporting requirements for the Summative assessment. To save valuable time and effort, the Contractor shall assign a requirements analyst for the Summative assessment. With Colorado's existing deliverables in hand, the analyst will re-examine the Contractor's recommendations and pre-fill the customized documentation developed specifically for Colorado. Colorado requirements will direct how data of various types shall be handled, such as the following:

- Will incomplete responses to items be given partial credit, and if so, how will this "attemptedness" be represented in test item data and on student reports?
- Will results from test takers who have recently relocated be included in the summary for the new or previous district? How will these data be represented?
- To protect student privacy, what is the minimum number of students in any demographic reporting group? How should data be presented for groups falling beneath this threshold?

Step Four: Score and Report Planning Meetings. Early in the Contract cycle, the Contractor shall schedule initial scoring and reporting meetings. During this face-to-face consultation, the Contractor and CDE shall verify both the prefilled documentation and report mockups. The Contractor's requirements collecting job will not be completed until the Contractor has satisfied CDE by delineating the specified content, look, and direction for each final report.

Step Five: CDE Confirms Requirements. The Contractor's program team, report designers, and technology developers shall continue to work with CDE to baseline this documentation in anticipation of future scoring, data analysis, and

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reporting activities. The Contractor's customer-requirements analyst and program-team leaders shall capture the most significant details about Colorado's intended output long before gathering student input during testing.

Step Six: CDE Approval of Mockups. Colorado reports must be well constructed, graphically pleasing, easy to interpret, and accurate. The Contractor shall stay informed about recent reporting advancements, federal regulations, identified user preferences, and trends in effectively reporting student data nationwide, and inform Colorado when adjustments to the reports are warranted.

Step Seven: Reporting Requirements Completed. The Contractor's customer requirements documentation and mockups shall be used during data testing, quality assurance evaluations, and production to validate that the Contractor's deliverables meet CDE educational measurement objectives.

A.8.2.c. Data Ownership. CDE shall own and control the usage of raw and final data generated for the summative assessments. CDE shall own the raw and final data generated through the Contract. The Contractor shall not be allowed to utilize data generated through the Colorado summative assessments for its own purposes. Any usage of the data generated through activities related to this Contract may not be used for purposes outside of this Contract without prior written approval from the data owners. CDE may choose to report the data in additional reporting layouts. Additionally, electronic images of the state level summary report by grade shall be delivered to CDE. The Contractor shall work with CDE to define all reporting layouts and formats, including delivery of electronic images of the state level summary report by grade.

A.8.2.d. Student Biographical Data Review (SBD) and Online Record Corrections. After testing, districts shall be provided with the opportunity to review the demographic data generated from the Summative assessments. The review process shall occur after all testing has been completed and scores have been submitted, but before all final assessment results are made available.

CDE shall have the option of using the Contractor's online portal, PearsonAccess™, to enable authorized staff to make corrections, verify student biographical data, and receive alerts about questionable information in real time. Should Colorado decide to use the Contractor's online portal, with input from the Educational Data Advisory Committee (EDAC), the Contractor, and data pipeline staff members. PearsonAccess™ shall be configured to incorporate a Colorado- supplied set of data edit rules that identify potential errors in online student- and test- specific data. These data edit rules shall define specific conditions that exist within a student test record, and may include single-field edits (e.g., invalid date of birth) and simple cross-field edits. In the event that a student test record contains a condition that does not agree with the defined data edit rules, a data alert message shall be generated and displayed on the PearsonAccess™ screen. Users shall be able to resolve the alert conditions displayed online so the student information is correct prior to final reporting.

The Contractor's comprehensive system shall combine paper and online to provide a single resolution process. By enabling districts to clean up all their

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data in one location online, the overall process can be more efficient and Colorado can better monitor and manage completion status. After districts complete record corrections, CDE can provide a certification of demographic data, at which point the state and district's data are submitted for reporting.

Should Colorado decide to use its own system for making student biographical data corrections rather than using PearsonAccess™, the Contractor shall support CDE during this process by providing student biographical data files prior to reporting and updating student biographical data files from CDE.

A.8.3. Reporting.

A.8.3.a. Quality Control.

The Contractor shall make all data operations for the Colorado summative assessment subject to multiple checks for accuracy before they are released.

During scanning, scoring, and reporting for each test administration, the Contractor shall review and confirm that student results data are consistent with Colorado requirements. The Contractor shall check that Colorado requirements have been met before presenting a data file or report to CDE for approval. This quality assurance step will be conducted by the Contractor's testers; they must be detail oriented, technically proficient, and follow documented best practices.

To confirm the quality of a data file, the Contractor's testers shall follow a process that typically includes, but is not limited to, the following:

1. Define all customer requirements and document all quality control procedures specific to the assessment program
2. Create a simulation (test deck) to verify that systems and algorithms are established according to client requirements
3. Check that all expected data fields and computed variables are in the file, populated, and represent valid and reasonable values
4. Should a value appear to be invalid, resolve or escalate the discrepancy according to resolution rules (These commonly apply to cases of blank fields, missing scores, out- of-range scores, and so on.)
5. Confirm that the number of students scored per test form, the number of schools, and district identifiers are consistent with expectations
6. Check data fields to confirm that content categories and attributes match requirements documentation
7. Confirm that data analyses comply with business decision rules
8. Verify that data analyses results are reasonable, accurate, and complete
9. Check that minimum/maximum score values, standard errors of measurement, performance score ranges, and weighted means of district or state scores match requirements documentation
10. Verify that values for raw scores, scaled scores, and score distributions are within expected ranges
11. Check samples of reports at every organizational and aggregate level

The Contractor shall develop and implement quality control procedures for checking the accuracy of all test information, all student scores and

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identification, and all summary data. The standard for the error rate of data reports provided by the Contractor shall be <u>zero (0.0)</u>. This excludes erroneous data provided by schools, districts, and state.

The Contractor shall plan and prepare quality assurance (QA) schedules that will allow work to flow in a timely, effective manner while maintaining high quality deliverables. CDE shall review and approve the QA schedules annually.

The Contractor shall create detail logs that trace the application of QA procedures to the state score reports after each administration. The Contractor is responsible for maintaining quality products and services in all aspects of the assessment program component from initial development of training materials to the production of electronic data files and score reports.

A.8.3.b. <u>Formatting of Reports</u>.

Assessment results for the summative assessments shall be reported in a "user friendly" format. The reporting system shall be designed to complement instruction and to facilitate the use of assessment results to improve student achievement. Reports shall reflect areas of strength as well as areas that need to be targeted for instruction.

The Contractor shall utilize feedback from students, parents, administrators, and teachers on report shells and content when designing and creating the reporting system. The design and layout of reports shall be initiated in a timely manner so that CDE has sufficient time to review the reports and to provide feedback to the Contractor.

The Contractor shall create reports that present categories of data in a consistent way, making it easier to read results across reports for those stakeholders who use more than one type of report.

The Contractor shall provide the necessary data for each user group as defined during the requirements documentation process with CDE. The Contractor shall provide the required reports listed in the following figure.

Colorado Student Assessment Reporting Deliverables Table		
Deliverable Name	**Medium**	**Copies**
State, District and School Summary Reports – by grade and content area - PDF report and data file	Electronic	
School Roster Report - PDF	Electronic	
Individual Student Reports – per school	Paper and Electronic	2 paper copies per student
School and District individual student-level data - file	Electronic	

After Colorado's requirements have been fully defined and documented, the Contractor shall provide mockups for Colorado review.

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A.8.3.c. <u>Individual Student Reports</u>. Score reports shall fulfill the federal reporting requirements of the Elementary and Secondary Education Act. Specifically, the reporting shall meet the expectations outlined in current Peer Review requirements.

The Contractor shall present overall student scores by subject and compare each individual student score against Colorado state totals. Individual Student Reports shall provide indicators of the student's performance level both in narrative form and graphically. This information shall offer a roadmap to student improvement that identifies both strengths and weaknesses in the student's performance. At a minimum, individual score reports shall summarize the student's performance in all content areas on which the student was assessed. This report shall include an overall transformed scale score, performance level, performance level descriptor, and sub scores for each content area tested. Two (2) paper copies (one for the school's student permanent folder and one for the parent) and an electronic version of individual student score reports shall be prepared that summarize the student's performance. The reports must include an indication of measurement error, such as error band graphics; relevant comparative information such as a bar chart displaying student scale score, school scale score mean, district scale score mean, and an explanatory narrative on all reports where appropriate.

The Contractor shall create actual mockups for the Colorado Student Assessments after Colorado requirements have been fully documented early in the project cycle. The Contractor shall print reports on preprinted color paper to provide a full-color presentation at a fraction of the cost for offset color printing. The Contractor shall also develop report shells translated into Spanish with explanations for all assessments and, should Colorado exercise its right to move forward with the development of Reading and Writing assessments, the Contractor shall provide Spanish language reports for the Spanish Reading and Writing assessments for grades 3 and 4.

A.8.3.d. <u>State/District/School Reports</u>. The Contractor shall use PearsonAccess™ to generate reports at the student, school, district, and state levels. The same data reported on the individual student report shall be aggregated for state/district/school reports. Additionally, state/district/school reports must provide disaggregated data by student subgroup and trend data.

The Contractor shall provide summaries of results for accountability in both aggregated and disaggregated forms. **Aggregated results** summarize data across all students tested by school, district, county, and state. **Disaggregated results** summaries only include data for students meeting a specified criterion, such as belonging to an adequate yearly progress (AYP) reporting group or having tested with a given accommodation. To protect student privacy (FERPA, 1974), the Contractor shall not report disaggregated results where a demographic reporting group contains so few students that an individual student could be identified. CDE and the Contractor shall work together to determine what hierarchy level that summary reports will be generated. Electronic reports must be generated that summarize the performance of the state/district/school on all components of the assessment taken and on any sub-domain or

instructional objective sub-score. Exact content and format for each of the reports and files listed below will be further refined during the project. The Contractor will work with CDE to create the following reports and files:

- State PDF reports of summary and disaggregated data by grade and content area
- State file of data used to populate the district summary and disaggregated reports by grade and content area
- State file of data used to populate the school summary and disaggregated reports by grade and content area
- District PDF reports of summary and disaggregated data by grade and content area
- District file of data used to populate the district summary and disaggregated reports by grade and content area
- District PDF reports of school level summary and disaggregated data
- District file including PDFs of all individual student level reports
- District file of data to populate the school level summary and disaggregated
- School PDF reports of summary and disaggregated data by grade and
- School file of data used to populate the school summary and disaggregated reports by grade and content area
- School file including PDFs of all individual student level reports
- School file of all individual student level data

A.8.3.e. <u>Reporting Approval</u>. During scanning, scoring, and reporting for each test administration, the Contractor shall review and confirm that student results data is consistent with Colorado requirements. The Contractor shall check that Colorado requirements have been met before presenting a data file or report to CDE for approval.

After CDE has approved the report formats and the type of information that will be included on the reports, the Contractor shall prepare accurate printed examples of the reports using mock data. The Contractor shall submit the report mockups to CDE for approval before proceeding with creation of the final score reports. Additionally, the first district reports processed will be used as a validation trial run for approval.

Following each test administration, the Contractor will print score reports for a small number of selected school districts and submit these reports to CDE for approval before any other reports are produced. The first school districts processed will be mutually agreed upon by the Contractor and CDE and will be considered a trial run of the reporting process. This report printing/approval process, bellwethers by CDE will be designed to be completed within a period of two to three days.

Prior to the distribution of reports, the Contractor shall provide computer readable student level data files to CDE. Prior to the first transfer, the Contractor and CDE shall mutually agree upon the exact format of the data files. However, the Contractor shall plan for the first transfer to be a direct electronic transfer to an agreed-upon secure server via FTP to be followed with an acceptable computer readable media (DVD preferred). The computer readable data file will include an indicator that specifies whether the student's biographical information was obtained from a pre-ID.

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A.8.3.f. <u>Reporting Dates</u>. Colorado educators shall have the ability to quickly view assessments results for students tested online or on paper through PearsonAccess™. Additional capabilities shall include data-sorting, data filtering and viewing data in PDF format. Reports and data files shall be viewable via a published area within the portal and saved onto the user's system if desired. Users shall be able to access training manuals, interpretive guides, and other documents CDE posts there. CDE and Contractor shall work closely to arrive at an agreeable timeframe for report delivery, keeping in mind CDE's requirement for having individual student results no later than the first Friday in June, after the initial operational administration and standard setting year. The timeframes for reporting following the fall High School administration will be no longer than the spring reporting of the Elementary and Middle School administration.

A.8.3.g. <u>Report Dissemination</u>. The Contractor shall maintain security of all individual test results. Individual test information shall be made available only to CDE, authorized school district personnel, and other entities identified and authorized by CDE. The Contractor shall provide all of the score reports and files to school districts as early as possible. The two copies of the Student Score Report must be provided in a paper copy so that one copy can be distributed to parents and the other retained in the student's permanent folder. Paper copies of individual student reports shipped to school districts shall be packaged to allow districts to easily separate the reports and to distribute them to individual schools. CDE will provide a list of names, emails, and mailing addresses for each district's assessment coordinator.

Other reports shall be provided in electronic format to districts and schools, such as via a secure web site or by a CD delivered to the district by a secure carrier.

Additionally, Colorado educators and districts shall have the ability to quickly view assessment results through PearsonAccess™. The PearsonAccess™. security module shall provide administrative user authentication and authorization services. CDE shall have control over certain administrative security features such as who is allowed to access the system, what level of the system (state, district, school) each user can access (available levels will be configured to match the naming convention used by Colorado), and which administrative functions (enrollments, student data management, order tracking, viewing reports, etc.) each user is permitted to access based on their role. Available roles and their associated permissions shall be configured according to CDE requirements. Each authorized user of PearsonAccess™ shall be given a unique user name and password, and no secure area within the system can be accessed without proper authorization. Additionally, each user shall be authorized to access only certain data records within the system (as described above with respect to user levels and roles). Initially, the Contractor shall assign a user name and password to selected state-level individuals as specified by CDE. When accessing the administrative system for the first time, the user must agree to a confidentiality statement (customized by CDE) and change the randomly generated password. Once inside the system, initial users will be able to establish new administrative user accounts by creating user profiles.

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Authorized administrative users can modify the permissions assigned to a user role at any time by simply selecting or deselecting check boxes. Changes become effective immediately.

A.8.3.h. <u>Reporting Errors</u>. The Contractor shall immediately notify CDE when an error in reporting has been discovered. The Contractor and CDE shall develop a plan for correcting the error. The Contractor shall also provide a revised timeline for correcting the issues and re-creating affected reports. Should a reporting issue occur, the vice president assigned to this Contract, the Program Manager shall notify CDE and shall draft a communication for notification of schools and districts.

A.8.3.i. <u>Reprinting</u>. CDE shall not be responsible for the fees associated with the reprinting of score reports if the reprinting is necessitated by the actions of the Contractor. CDE shall also not be responsible for fees associated with the reprinting of scores if the reprinting is requested by a district. If a district requests reprinting that is not necessitated by actions of the Contractor, the district shall be responsible for reprinting costs. The Contractor has determined costs for reprinting a districts score reports, including a set-up charge and a per-report fee to be charged to the district. The Contractor shall not proceed with any reprint processing until it receives a valid purchase order from the requesting district.

A.8.3.j. <u>Assessment Interpretive Guide</u>. Annually, the Contractor shall develop an Interpretive Guide to assist parents and teachers in interpreting assessment results from the Summative assessments. This publication shall contain images of the various reports and an explanation of each type of report. It shall also include information about tested content areas and a glossary of technical terms. The Contractor shall use its experience in developing interpretive materials to help stakeholders understand the components and terminology that accompany a state assessment program.

The Interpretive Guide shall be formatted in such a way that pertinent information can easily be copied at the school building for distribution to teachers or parents. The format shall have information that is specifically targeted to parents. This information shall start and end with page breaks so that a parent does not get a partial page with information before or after the page break that is out of context. Parent information pages and the teacher information pages shall each "stand alone," The guide shall be designed with specific text graphics, and related materials for the desired audience. CDE will approve all materials prior to publishing. The Contractor shall print and deliver this document to Colorado schools based on a schedule defined by CDE.

To further assist parents, teachers, and other education system stakeholders, the Contractor shall seamlessly integrate the various elements of Colorado's interpretive materials and help CDE avoid the potential formatting, terminology, and analysis variations posed by having multiple contractors involved in such a project. The Contractor shall assist Colorado users of this information to understand how it can be applied in conjunction with score report data to inform teaching, learning, and assessment practices. In coordination with CDE staff, the Contractor shall promote a common understanding of CDE's

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interpretive material and will design specific text, graphics, and related materials for the particular audience. CDE shall approve all materials prior to publishing. The Contractor shall use all means available to communicate with CDE and transmit materials for review—email, overnight mail, teleconference, video conference, SFTP sites, and the Contractor's secure Work-in-Process pages on the Contractor's website.

The Contractor shall produce and deliver the "Understanding Colorado's Assessment Reports" document to CDE in ADA-compliant PDF files that are ready to be uploaded to the CDE website. The Contractor shall also print and deliver this document to Colorado schools based on a schedule defined by CDE. The Contractor understands CDE's desire to give every individual equal access to Colorado education-related materials, and the Contractor shall support CDE's commitment to provide full accessibility to these materials as defined in federal Section 508 standards. The Contractor's assessment and editorial staff shall verify that all alternate tag descriptions used in these Section 508-compliant materials are accurate, content-specific, and accompanied by well-defined directives. The Contractor shall work with CDE to verify that all files posted to the Colorado website meet Section 508 accessibility requirements.

The URL for the Interpretive Guide shall appear on all levels of reports.

A.8.4. <u>Supplemental Reporting Modes</u>.

Work on the supplemental role-based permissioned electronic reporting modes shall only commence upon CDE Director of Assessment's written direction to do so.

A.9. Psychometric, Research, and Technical Activities

A.9.1. <u>Work Plan</u>. The Contractor shall adhere to the mutually agreed upon detailed schedule that outlines the tasks and durations for each year of the Contract. The draft schedule is included in Exhibit B.

A.9.2. <u>Piloting and Field Testing</u>.

A.9.2.a. <u>Piloting/Cognitive Labs for New Item Types - Sampling Design</u>.

The Contractor shall conduct a small number of cognitive labs during the 2013 field test administrations of new computer-based item types for the Colorado assessments. The Contractor shall sample a total of approximately 60 students from across Colorado who will be selected based on a stratified sample of school and student characteristics and who will examine items from science and social studies.

The Contractor shall recruit students from three school districts across Colorado, including one urban, one suburban, and one rural district. Where possible, students from the target grade level from various racial groups, genders, socioeconomic statuses, and disabilities will have the opportunity to interact with new item-types to ensure that they are functioning appropriately for students in the target population. Within these districts, the Contractor shall sample from at least two schools as needed to recruit 3-4 students from elementary, middle and high school grade spans for both content areas:

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Cognitive Labs					
District	# of Schools	Grade for Science	# of Students for Science	Grade for Social Studies	# of Students for Social Studies
District 1 – urban	2 schools	5	3-4	4	3-4
		8	3-4	7	3-4
		high school	3-4	high school	3-4
District 2 – suburban	2 schools	5	3-4	4	3-4
		8	3-4	7	3-4
		high school	3-4	high school	3-4
District 3 - rural	2 schools	5	3-4	4	3-4
		8	3-4	7	3-4
		high school	3-4	high school	3-4
TOTAL # of Students			30		30

Each item in the cognitive labs shall be administered to approximately 10 students. Contractor staff shall work with CDE staff during the recruitment phase to select districts—and students within districts—across a broad range of relevant demographic characteristics that reflect the population of students to be assessed and those potentially most impacted. Among the characteristics that will be considered in selecting students within a given grade shall be ethnicity/race, gender, socioeconomic status, and disability type. For disability type, the Contractor shall include, as opportunity permits, students with visual disabilities, learning disabilities, ADD/ADHD, sensorimotor disabilities, or other disability types that occur in relatively larger numbers in the general student test-taking population. As noted above, general district and school characteristics will also be considered (i.e., geographical region and school size/type).

The Contractor shall conduct at least two rounds of cognitive labs that shall occur early enough in the development process to allow any recommendations arising from the labs to be incorporated into any desired revisions to test components prior to field testing and online introduction of the various content areas. The Contractor shall review and discuss results of these labs with CDE and others deemed appropriate to determine the sufficiency of these labs and the possible need for additional labs or related research as part of an ongoing annual research agenda.

The Contractor shall conduct an initial cognitive lab no later than spring 2013 for elementary and middle school students. This event will require participation of approximately 40 students sampled from across three districts within Colorado. The second cognitive lab event shall be no later than fall 2013 and shall again examine the interplay among item type, students, procedures, and

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technology, but this time for high school students. This event will require participation from approximately 20 students across three districts. The Contractor shall use the same criteria to select districts and students as were recommended for the initial cognitive lab. Students shall not need to participate for longer than about one hour in any session. For science, students shall receive 2 simulations and between 3-5 technology enhanced stand-alone items. For social studies, students shall receive and/or one or two performance events and 3-5 technology enhanced stand-alone items in a given session.

Usability and content staff from the Contractor shall serve as recorder/observers for each event. The Contractor shall focus primarily on one-on-one observations of students as they work their way through all assigned items. The Contractor shall conduct full screen capture of all student interaction with the computer, along with video and audio feedback also collected via computer. Additionally, each observer shall take notes during each student's session and, as needed, prompt students with appropriate questions (e.g., "What are you thinking about at this moment?" after long periods of silence or inactivity). In addition, observers shall ask questions from a post-session questionnaire and/or administer a short survey to each student. After initial data collection has been completed, the Contractor's staff shall complete coding sheets for each student capturing and summarizing important elements of student performance, incorporating and using other sources of information (e.g., screen captures, video, etc.) as appropriate. Data shall then be ready for further analysis. See additional details for the coding sheets and analyses in Section A.9.2.b below.

A.9.2.b. <u>Psychometric Analysis of Piloting/Cognitive Labs for New Item Types</u>.

As noted briefly in the preceding section, the cognitive labs shall focus on two general issues, each comprising several more specific concerns. These general focal points are:

1. Student content and cognitive processing concerns (student interactions with items)
- How do students work through a particular item?
- Do they follow a logical sequence of steps in solving a problem?
    o Do they follow the sequence the item developer anticipated they would follow?
    o Do they follow an alternate strategy to solve the item?
        ▪ If so, does this alter the construct being assessed?

- Are students confused by any part of the item wording?
    o Do they reread parts of the item?
        ▪ If so, which parts?
        ▪ Why?

    o Do students misunderstand or fail to understand meanings of words?
    o Do students mispronounce words
- Do students read item and test directions?

    o Do they understand them?
    o Do they reread parts?

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- If so, which parts?

- Do students understand how they are to respond?
  - Content-specific issues
- Do students understand the content-specific parts of the item (e.g., math; science; etc.)
  - Is relevant background knowledge activated?
  - Is background knowledge used appropriately?
  - Do students misunderstand or fail to understand content-relevant terms?

2. Student and item interactions with delivery system and related technology
- Does the format of the item provide opportunity for students to demonstrate their ability appropriately?
  - Or does the format confuse students?
- Are manipulatives easy to use and do they work properly?
- Are they equally accessible to students with various disabilities?
- Do other added features (e.g., zoom capability) that are intended to enhance students' awareness and understanding of the tasks they are being asked to undertake in a given item function appropriately?
- Do students understand how they are to respond to a technology-enhanced test item?
  - Are students familiar with the controls—or do they quickly become familiar with them?
- Do students use the available technology tools (e.g., calculator, Notes feature, etc.)
  - Do they use the tools successfully?
- Do alarm and warning windows function appropriately when students engage in task irrelevant or task-inappropriate actions online?
  - Are computer responses appropriate and sufficient to resolve or redirect such actions?

The analysis of cognitive lab results shall be directed toward providing appropriate descriptive data back to the various department and staff responsible for major aspects of item and test development such as content, cognitive processing, item and test structure and format, and technology in a framework that helps them identify areas of concern and propose approaches to resolve any potential issues noted.

During the cognitive labs, the Contractor's observers shall work with checklists and data coding sheets to document their observations of students as they respond to test items. The Contractor shall employ additional approaches to data collection, potentially including video, audio, and screen captures. After the cognitive lab sessions have been completed, observers shall work together to prepare cognitive lab summary sheets and to summarize item-level data across all relevant students. All student level data shall be appropriately tagged with a unique ID for each student to facilitate access and retrieval of all information relevant to a particular student's performance.

The Contractor's cognitive lab staff shall provide summary information for each item tested in the cognitive labs back to the appropriate content and technology specialists working on the Colorado assessment programs. They shall have

access to individual student coding sheets, item summary sheets, item images or screen captures of actual online item functioning, and audio/video recordings of student performance. Item summary sheets shall provide an overview of item functionality, including the number of students who answered the item correctly, a description of areas within each item where problems or issues were observed (if any), as well as item components or features that were significantly successful/useful. Additionally, any indications of students' emotional reactions to each item shall also be summarized as such reactions are observed or inferred from student behavior. Finally, any recommendations for adjustment to an item, item type, set of instructions, manipulative, or other item or task feature shall be presented. A full set of such information shall be made available to both content and technology specialists as appropriate for particular content/item type groups.

Upon conclusion of each cognitive lab, The Contractor shall also collaborate to produce a written report documenting the results of the cognitive lab for CDE. The Contractor and CDE shall work collaboratively to discuss and evaluate the results of each lab, to prepare further reports and presentations for Colorado's TAC, for Peer Review, or for other concerned stakeholders and public accountability forums as deemed appropriate by CDE.

The above and the preceding section represent the Contractor's current thinking on the cognitive labs, not necessarily the final product. Dependent on CDE's approval these activities and timelines will be refined.

A.9.2.c. <u>Field Test - Sampling Design</u>.

Field testing will serve two purposes:

- It will allow the Contractor the opportunity to provide technology support on a smaller scale before the operational assessment the following year.
- It will provide the necessary statistical information in order to screen items and develop forms for the first operational assessment.

The Contractor will support approximately 30 districts from a technology perspective during field testing. This will require a two-tiered sampling plan. The first will be at the district level. The second will be at the school level. As participation in field testing is voluntary in the state of Colorado, multiple substitutions at both the district and school level will more than likely be required.

The Contractor shall construct the database that will be used to select the district and school samples by using demographic data from previous statewide assessments (to be provided by CDE) to construct the database with Colorado schools containing any of the grades 4, 5, 7, 8 and 11.

The database shall include information on the following potential stratification variables:

- Geographic area
- Urban, suburban and rural designation
- Gender representation

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- Racial/ethnic composition
- Students with disability designation
- Mean student/school achievement
- District/school size
- Students with limited English proficient designation
- Socio-economic status (participation in free/reduced lunch program)

In addition, the Contractor shall include any other variables that CDE views as important in selecting the initial district and following school samples. The database shall be used to construct the frame, or the list of sampling units, that will be used to draw the sample.

The Contractor shall employ a variation of the stratified random sampling design called multiple stratification: primary strata and secondary strata or substrata. The Contractor shall use the following primary strata to sample districts and schools (and thus students within schools).

The Contractor shall use school size and school achievement as the secondary strata, though no school shall participate in more than two field tests at any grade level. The sample size will also vary across field tests. As specified by the artificial intelligence scoring needs, the sample size for each field test form will be 1250 students (select 1500 to obtain 1250 usable responses).

The Contractor shall draw one sample for each field test. During and after the process of sample selection, the Contractor shall prepare the following reports:

- During the process of sample selection, the Contractor shall prepare a conditional report containing sample statistics (in hard copy and in Excel) for each field test sample. The Contractor shall submit conditional reports for CDE conditional approval prior to the selection of all the field test samples.
- After all field test samples have been selected and conditionally approved by CDE, the Contractor shall prepare a final report (also in hard copy and in Excel). The final report shall contain sample statistics for each sample.
- The Contractor shall also submit a summative list of all units across all field test samples (in hard copy and in Excel) to verify that no unit has been selected to participate in more than two field tests at any one grade level. The list shall include the following information for each unit:
  o Name of the field test;
  o Unit code;
  o Name of the unit;
  o Grade level; and
  o Projected number of students participating in the field test.

The process of sample selection proposed by the Contractor shall consist of the following steps with steps 3-14 completed once at the district level and once at the school level:

1. The Contractor meets with CDE immediately after the contract is awarded to discuss details of this plan and to address any CDE concerns as needed.
2. The Contractor constructs a database for grades 4, 5, 7, 8 and 11.
3. The Contractor selects samples for all the field tests following the sample design.

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4. During sample selection, the Contractor prepares conditional reports describing selected samples for each field test and submits reports to CDE.
5. CDE provides conditional approval of all field test samples.
6. The Contractor submits a report describing the selected samples
7. The Contractor submits a sorted summative list of all units across all field tests.
8. CDE provides approval of all field test samples to be invited to participate.
9. Units are invited to participate.
10. Participation is confirmed.
11. Substitutions are proposed by the Contractor, approved by CDE and contacted as needed.
12. The Contractor submits final report describing the selected and confirmed samples.
13. The Contractor submits a sorted final summative list of all units across all field tests.
14. CDE provides final approval of all field test samples.

A.9.2.d. <u>Psychometric Analysis of Field Test to Support Operational Assessment</u>. The Contractor shall conduct a study to determine which item response theory (IRT) model best fits Colorado's needs. Final design for this study shall come about through close collaboration between CDE, the Contractor's psychometric staff, and the TAC. Analyses shall include confirmatory analysis of the dimensionality of each subject area test to verify that the underlying construct can be treated as unidimensional. To be comprehensive, all item types and modes of administration shall be studied. The study shall be conducted using data from the initial standalone field test for science and social studies.

The Contractor shall apply the following combinations of dichotomous and polytomous IRT models to the data from science and social studies.

Configuration	Dichotomous Model	Polytomous Model
1	Rasch	Partial Credit Model
2	Three Parameter Logistic	Generalized Partial Credit Model
3	Three Parameter Logistic	Graded Response Model

Theta Estimation and "Number-Correct" Scoring

For logistic models, the Contractor shall evaluate two methods of deriving student scale scores—theta estimation and "number-correct" scoring.

Statistics for IRT Model Selection

The Contractor shall begin these analyses by assessing the unidimensionality of the data from the standalone field tests for Science and Social Studies after their administration in spring 2013.

To verify that the tests are essentially unidimensional, the Contractor shall analyze item- level test response data with an unrotated principle components analysis.

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Item-fit and person-fit indices shall be computed for each item and each examinee using the three proposed configurations.

The degree of misfit for each of the three configurations shall be tabulated across items and examinees for each of the subjects being field tested in 2013. Critical values for persons and items to be considered as misfit shall be determined in consultation with CDE and the Colorado TAC.

The Contractor shall calculate the standard error of measurement for each examinee, and the distributions of SEMs across the theta continuum be compared for each configuration. This will allow the relative precision of the different models to be compared.

The Contractor shall calculate IRT parameters and item-fit statistics for all field test items using publicly available software. The Contractor shall also provide CDE with copies of software including one research license for each of the two software programs and all necessary information needed to perform replication analyses.

Reporting Recommended Changes

After analyzing operational data, The Contractor's psychometric, development, and managerial staff shall provide a report to CDE with recommendations for changes in *process* for item development and test administration.

A.9.3.   Operational Analysis. In addition to the analysis of results performed for the field test, test-level statistics and student scale scores shall also be reported for the operational assessments.

The Contractor shall provide the following item level statistics for each item used on the operational test - item mean score and item score-test score correlation. For selected response items the Contractor shall also provide for each possible response option (including the keyed response) the percent of low, middle, and high scorers who selected each option, proportion of all examinees who selected each option, and the option discrimination. For non-selected response items the Contractor shall provide the proportion of low, middle, and high ability students plus the total proportion of all examinees achieving each score point.

For items scored by either human or AI scoring that receive second check scores, the Contractor shall provide the following measures of inter-rater reliability—total count of examinees who received second scores, percent of perfect agreement, percent of adjacent scores, and percent of non-adjacent scores. If a rubric has multiple dimensions, these inter-rater reliability measures shall be calculated for each separate dimension individually.

Items shall be screened for DIF using the Mantel-Haenszel procedure and its extensions to polytomous data. Groups of interest shall be determined in consultation with Colorado and the TAC. Both the group of interest (the focus group) and the group to which it is being compared (the reference group) shall have at least 300 members in order for estimates of DIF to be reliable. DIF analyses shall be performed if both groups being compared have at least 300 members. These CTT-based statistics shall be calculated

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within the Contractor's item-banking system using industry-standard methods as detailed in the previous section. Alternate DIF detection methods for use with groups smaller than 300 members are being investigated.

The Contractor shall provide IRT parameters and item-fit statistics for all items used operationally. The Contractor shall use publicly available software.

If the theta estimation method is chosen for the derivation of examinee scale scores, then these calculations shall take place during the scoring and reporting process. As noted for field test analysis, the code that carries out these calculations is embedded within the Contractor's scoring system and is proprietary, which the Contractor shall make available to Colorado or any third party contractors in standalone form for validation with the completion of an appropriate licensing agreement.

Examinee theta scores shall be produced. Scaled scores shall be linear transformations of the theta scores onto a reporting scale determined by Colorado with advice from the TAC and the Contractor. The Conditional Standard Error of Measurement (CSEM) associated with each examinee theta score shall also be calculated and placed on the reporting scale and shall be used to place a confidence interval around the reported scale score.

The Contractor shall provide the following IRT-based test level statistics—the test characteristic, information, and CSEM curves. In addition to CSEM estimates, the Contractor shall provide traditional CTT-based estimates of reliability (coefficient alpha) and SEM. The Contractor shall also provide raw test score means and standard deviations for each operational test form. They shall be included in the technical manual.

After completing operational data analysis, The Contractor's psychometric, development, and managerial staff shall provide a report that includes recommendations for changes in *process* for item development and test administration that may improve the efficiency of the program while not demonstrably altering the measurement characteristics of the assessment.

A.9.4. <u>Scaling and Standard Setting</u>.

A.9.4.a. <u>Vertical Scale Design</u>. The Science and Social studies assessments will not include vertical scaling.

A.9.4.b. <u>Scaling</u>. The exact model to be used for scaling the summative assessments shall be dependent upon the IRT model selected by CDE after the administration of the standalone field test.

The scaling of the summative assessment shall be accomplished through the application of IRT to student scores on the assessments. The Contractor shall establish the base scales in the first year of operational administration of the assessments. The Contractor shall work with CDE and the Colorado TAC to determine the most useful metric for the scale of the new assessment. Student theta scores shall be estimated using IRT, and they shall be transformed to the reporting metric via a linear transformation and rounding to the nearest integer.

All items being used operationally shall be field tested and calibrated with the appropriate IRT model. All field test items shall be assessed for their fit to the

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IRT model during the field test analyses, and each field test item with poor model fit will be closely scrutinized both by the Contractor's staff and during data review to determine if its poor fit is due to flaws within the item.

Model fit shall again be assessed during the analyses of the operational administration results.

Item misfit analyses shall mainly be used to identify candidates for deletion from the equating sets because the inclusion of items with poor fit statistics has the potential to introduce error into the equating relationship. If an item displays a significant amount of misfit (particularly an item that exhibited normal levels of fit the last time that it was used), the item shall be checked for problems and may be dropped from the equating set after consultation with CDE.

The Contractor shall use graphical methods to assess model fit. This shall be accomplished by plotting the empirical versus the predicted probabilities of a correct response (dichotomous items) or item score (polytomous items) by ability level. Additional quantitative measures of item fit will also be calculated. Specific fit statistics will be identified after the IRT model to be used for the assessment has been chosen.

Student level score reliability shall be calculated for each student at the time of scoring. Reliability shall be expressed through the Conditional Standard Error of Measurement (CSEM) derived using IRT. This will be reported in conjunction with student scale scores in the form of a 95% confidence interval around the reported scale score.

The maintenance and monitoring of the scale score results across years will be addressed in the section covering linking and equating.

A.9.4.c. Standard Setting (Educator Meeting). Ways to utilize 12 grade ACT scores from the previous year in the Standard Setting process will be investigated. Ways to utilize 2011 8th grade Trends in International Mathematics and Science Study (TIMMS) results in the Standard Setting process will be investigated.

A Bookmark standard setting approach shall be used to set performance standards on the new Colorado summative assessments (see Cizek and Bunch, 2007, pp. 155-191) for a detailed explication of this method) combined with as much confirmatory evidence as is available.

Standard setting panels of k-12 educators, higher education educators, as well as representatives from the business community as appropriate, must be included in the process. The Contractor should plan on 8-10 member, content specific panels for each grade. The standard setting meeting shall begin with training on the procedures for the standard setting. Standard setting materials shall be shared with CDE with a minimum of three days for review. Revisions to materials recommended by CDE will be made prior to the standard setting. The standard setting shall include three rounds of ratings, the first of which begins at the conclusion of the training. The second and last round shall include impact data for the panels to consider.

The Contractor shall investigate ways to connect proficient performance on the grade 12 assessment to performance in college and to other measures of workforce readiness. As operational data from the new Colorado summative assessment is accumulated over time, the relationship between the cut scores set in the standard setting and work readiness shall be empirically examined by the Contractor. The Contractor shall also assist in developing communications with the field regarding potentially changing cut scores.

A.9.5. <u>Linking and Equating</u>. The Contractor shall post-equate the summative assessments using the "Non-Equivalent Groups Anchor Test" (NEAT) design.

The anchor test shall be selected to be a representative sample of the test as a whole in terms of content, and items will be placed as close as possible to their location in the previous year's test form. The results of the field test shall be used to determine what item types should be included in the anchor test. Item types in the linking set shall be chosen to be representative of the item types in the test as a whole to the greatest extent possible.

The operational equating analyses shall be conducted using a sample of students from a set of "priority districts" that form approximately 30% of the student population in Colorado (about 18,000 students per grade). The districts shall be chosen to mirror the demographic characteristics of Colorado's diverse student population, including ethnicity, gender, limited English proficient and special education students, supplemental education services, geographic regions, urban/suburban/rural classifications, and other demographic characteristics identified as critical by CDE and the TAC. The priority districts will be reviewed and approved by the CDE prior to their implementation. Their responses shall be processed first, allowing statistical analyses to begin before hand-scoring of constructed responses has been completed.

The *Calibration, Equating, and Scaling Specifications* (CES Specs) document will explain the entire equating process from preparation to cleanup. The lead psychometrician shall create this document and send it to CDE for their review and approval. If CDE desires, we can also assist as needed in securing TAC review and approval.

After the document has been approved by all relevant parties, the next activity in the equating process shall be the "dry-run," which allows all participants to become familiar with the procedures to be used for the equating and to check that all software is properly configured. All analyses for linking and equating scaled scores shall be independently conducted by both the lead research scientist and a second research scientist. Their results shall be compared at multiple points during the equating, and any discrepancies will be resolved before proceeding with the remaining stages of the analysis.

The next activities shall entail the creation of the data and command files for input into the IRT software (MULTILOG 7, Thissen, 2003), which shall be used to generate the initial item parameter estimates. The parameter estimates then shall be examined for out-of-range results. Also, item fit analyses take place at this point in the process. If items are flagged for possible anomalies or unexpected misfit, the data and items will be examined to check that these are not due to item publishing or data errors. After these are ruled out, the Contactor's psychometric staff shall address remaining anomalies by fixing the out-

of-range parameters for flagged items to reasonable values such as fixing discrimination values to a minimal positive value, fixing difficulty values to a minimum or maximum of a fixed range, or setting pseudo-guessing parameters equal to the reciprocal of the number of SR item options. Decisions shall be made on a case-by-case basis in consultation with CDE. In extreme cases the item could be suppressed from use as an operational item, but this would only be done after discussion with and at the direction of CDE.

For all horizontal equating, the parameters from the current form shall be placed on the base scale for its subject and grade. The base scale for science and social studies shall be the scale from the 2014 administration. Horizontal equating shall not take place for the assessments during the administrations where the base scales are being established. When horizontal equating does commence, anchor sets for horizontal equating shall come from the immediately previous administration and will form approximately 30% of the form. Since each year's items are placed in the metric of the base scale, operationally the equating shall be determining the constants *A* and *B* above that shall allow the parameter estimates from the current administration to be placed in the metric of the previous administration (which will be in the metric of the base scale as a result of the previous year's equating).

After IRT parameter estimation issues have been resolved, MULTILOG shall be rerun as necessary to produce the final parameter estimates for each subject and grade form. The process shall then move to the next stage, anchor item parameter stability checking. As such, the Contractor shall use the following analyses to identify items as candidates for removal from the anchor set. This is a judgmental process that depends not only on differences in item parameters but also on the items that would remain in the anchor set after removal, the relative effect that removal would have on the equating relationship, and other similar factors. Therefore, while the Contractor will identify items as candidates for removal, CDE shall have the responsibility to make the final determination of the composition of the anchor sets.

Item parameter stability analyses shall be conducted to identify items in the equating set that appear to differ significantly in their statistical properties between their appearance on the target and new forms. The results of these analyses shall be considered together with the characteristics of the reduced anchor set. The benefits of removing a possibly malfunctioning item from the equating set versus the risks of having a reduced item set that is too short or is unrepresentative of the larger test form should to be weighed. The Contractor shall produce a summary of the above analyses and shall confer with CDE during the course of the equating to identify the final set of anchor items.

After the final composition of the equating set has been approved, the Contractor shall rerun the Stocking-Lord equating software using the final equating set to produce the final equating constants. These constraints shall be applied to the item parameters from the final MULTILOG run to produce the IRT parameters that will be used for scoring students.

The final step in the equating process shall be to use the IRT Score Estimation Program (ISEP) to produce scaled scores for all students in the equating sample. This is a standalone version of the scoring code within the Contractor's scoring engine and is proprietary to the Contractor. It will, however, be licensed to CDE and any designated

verification contractors upon completion of an appropriate licensing agreement. These scaled scores shall be used to determine the predicted results of the assessments. These predicted results shall be compared to historical data from earlier administrations (if available) and shall be shared with CDE for their approval prior to the finalization of the equating and the initiation of scoring and reporting activities. Written approval of the results from CDE shall be required before scoring and reporting can begin.

Students taking the paper version will be included in the operational equating. Items that appear on in the same form on both the paper and online test forms (e.g., non-technology enhanced items) will be treated as the same item, and items that are "clones" of or that are otherwise replacements for technology enhanced items will be treated as separate items from the TE item within the equating. In this way the scale for the paper version will be brought onto the overall reporting scale, with a strong anchor of items common between the paper and online versions of the test.

A.9.6. <u>Plans for Establishing Technical Adequacy</u>.

A.9.6.a. <u>Peer Review Requirements</u>. The Contractor shall assist CDE in all areas necessary for a successful Peer Review of the Colorado student assessments. The Contractor shall work closely with CDE in planning activities; processing and compiling data; determining and providing ad hoc data analyses; and conducting alignment, linking, validity and unintended/intended consequences research studies as required to facilitate the state's successful completion of the Peer Review process.

A.9.6.b. <u>Alignment Studies</u>. The Contractor shall arrange for an external validation study for the alignment of the summative assessment, providing that vendor with access to the item-level information necessary for completing the study. CDE shall have final approval of the 3rd party performing the study, while the Contractor shall have the contractual and payment responsibilities for seeing that the study itself is completed.

A.9.6.c. <u>Establishing Comparability</u>. The goal of maximizing comparability between accommodated and non-accommodated test forms and administrations must be paramount throughout the development process. The degree of success of these efforts will be researched and reported post administration. The Contractor shall establish comparability between accommodated and non-accommodated test forms and administrations, including between paper-based administration and computer-based administration.

A.9.6.d. <u>Technical Advisory Committee (TAC)</u>. The Contractor shall work with CDE to plan and participate in TAC meetings. All psychometric processes, including test design, scaling, equating, standard setting and validation procedures shall go before the TAC for review and must receive CDE approval. The TAC meeting costs shall be reconcilable, such that CDE shall not be responsible for paying the Contractor for a meeting that does not occur. There shall be three, two-day TAC meetings each year in Denver, Colorado. The Contractor shall be responsible for securing a location and providing continental breakfast and lunch for all attendees. At least two of the Contractor's staff members shall attend each meeting in person. Additional representatives from the Contractor

shall be available as needed upon CDE request. With prior approval from CDE, these additional personnel may participate via teleconference or via another distance communication technology. Up to eight CDE staff members will participate.

The Contractor shall fund four members in total, two from Colorado, and two from out of state. TAC members shall be given a $1,500 honorarium per day. The Contractor shall also reimburse the TAC members for meals, mileage or airfare, rental car or cab fees, and lodging. An agenda for each TAC meeting will be drawn up by the Contractor's staff and distributed to CDE and TAC members prior to each meeting. Attached to each agenda will be the background materials and questions to be reviewed by the TAC and resolved by CDE.

Each TAC meeting shall commence with a Contractor staff member making a presentation of the issues to be discussed. The length of that presentation and the format (PowerPoint, etc.) shall be tailored to the issues presented at each particular meeting. The Contractor's staff shall facilitate the TAC members' discussion of each agenda item, noting the new questions that arise, the recommendations made, and any resolution of technical challenges agreed upon. During the meeting, a Contractor staff member not facilitating the meeting shall take minutes. Those minutes shall be distributed to CDE and TAC members within two business days of the close of each TAC meeting.

A.9.6.e. <u>Technical Report</u>. The Contractor's Psychometric and Research Services staff shall produce a technical report and yearbook. The Technical report shall include all relevant psychometric information for each test, including but not limited to the following: purpose, test blueprint, alignment of the test to the relevant CDE content standards, test development procedures, reliability data, validity data, accommodations and testing of students with special needs, security, administration procedures and issues that arose during administration, scoring, psychometric analyses (such as item analyses, DIF analyses, distractor analyses, and fit statistics), IRT calibrations, equating and scaling, standard setting, opportunity to learn data, reporting procedures and formats, special studies, and appropriate use and interpretation of test data. The appendices, organized as yearbooks, shall provide detailed statistics on the various assessments for a given academic year. Each year a new yearbook will be added. In addition, data and research completed building the validity argument for the Colorado assessments will be added to the technical report.

The Contractor shall deliver a Technical Report and Yearbook by August 15 of each operational administration year. An administration summary will be prepared for the standalone field test, but a formal technical report will not be prepared. This summary may be incorporated into the following year's Technical report. The Contractor's lead psychometrician shall facilitate the review of the annual Technical Report and Yearbook by CDE, CDE's Verification Vendor, and the TAC before the Contractor produces the copy for publication.

The Contractor shall report detailed results of all test administrations, as well as full details of all development and research activities conducted within that time frame, including item development and review, form construction and review,

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field testing, equating, comparability, DIF, and reliability studies, etc., and any other activities conducted in support of the Colorado Student Assessments since the last reporting period beginning with the first operational administration. Exact contents of the technical manual will be determined annually in collaboration with the TAC. The report must meet comply with the U.S. Department of Education's *Standards and Assessment Peer Review Guidance* (or similar document developed in the future).

A.9.7. <u>Irregularity and Data Forensic Analysis</u>. The Contractor shall provide CDE with a comprehensive suite of data forensic analyses designed to identify several unique potential sources of irregularities in Colorado's test data.

The Contractor's scanners shall capture item responses by measuring the degree to which infrared light is absorbed by carbon (a primary component of a Number 2 pencil's graphite) in the answer bubbles. This corresponds to the degree and intensity of graphite coverage in a bubble. The Contractor's suite of data forensic analyses shall identify testing irregularities that may occur due to potential improper behavior initiated by students, educators, or other school administrators. An overview of the types of data forensic analyses to be performed is provided below.

Erasure analysis. As part of the processes noted above, the Contractor shall perform checks on marks provided on student answer sheets by counting erasures. The Contractor shall provide CDE with reports summarizing wrong-to-right (WTR), right-to-wrong (RTW), and wrong-to-wrong (WTW) response changes at the school, district, and state level. Schools and districts with large counts of erasures will be flagged in the summary reports for further follow-up and investigation by CDE. Comparable analysis should be conducted with the computer-based form that could track students changing answers simultaneously or putting in answers at a rate inconsistent with reviewing the prompt and independently answering.

Response pattern similarity analysis. As an indicator of possible incidences of collusion among students, the Contractor shall investigate similarity within pairs of student response patterns. Pairs of students with statistically improbable levels of similarity in their response patterns (e.g., higher-than-expected incidences of two students selecting the same incorrect response option across numerous items) shall be flagged for further follow-up and investigation by CDE.

Aberrant response patterns. Recognizing that certain types of improper behavior related to test-taking, such as students being exposed to compromised items prior to sitting for the exam or having access to unapproved reference materials during the testing session, can result in what are commonly referred to as aberrant response patterns (i.e., student response patterns that are inconsistent with what is expected given the test's statistical measurement model), the Contractor shall examine the reasonableness of student response patterns by computing and evaluating person-fit statistics, flagging for CDE the students with statistically improbable patterns of responses, as indicated by their person-fit statistics.

The next three analyses are contingent on the Contractor's ability to obtain student data from the prior year that can be effectively linked to data from the current administration.

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Large score changes for students across administrations. Utilizing statistical prediction models, the Contractor shall conduct student-level longitudinal score comparisons across testing administrations, flagging students with statistically improbable gains or decreases in scores across years for further follow-up investigation by CDE.

Large score changes for classrooms, schools, and districts across administrations. A variation on student-level score change analysis, this analysis evaluates longitudinal test score changes at the classroom, school, or district level. As with the student-level analysis, classrooms, schools, or districts with observed test scores significantly greater or less than scores predicted by a statistical model will be identified for further follow-up and investigation by CDE. For example, if students from one classroom, on average, showed significantly larger-than-expected score gains from one year to the next relative to matched samples from other classrooms, that classroom would be flagged for further follow-up and investigation by CDE.

Impact data longitudinal comparisons. In instances where the observed impact data for a particular classroom, school, or district are under suspicion of irregularities, Contractor will compare distributions of students' scores near the cut scores for the current and previous administrations. For example, if 40 percent of students in a given classroom passed an assessment last year, but 80 percent of these students passed that assessment this year, the Contractor shall evaluate the likelihood of the higher passing rate by examining how close failing students came to passing the test in the prior administration. Additionally, the Contractor shall use statistical models to predict pass rates based on data from the previous administration and compare observed impact data with predicted impact.

Within a reasonable amount of time (to be determined with CDE), following the initial administration, the Contractor shall provide erasure analysis reports summarizing WTR, RTW, and WTW answer changes by school and district. For the initial administration, additional deliverables for more in-depth data forensic analyses, including response pattern similarity analyses, longitudinal analyses of score and impact data changes over time, and person-fit results, will be delivered separately by August 31, 2014. The Contractor and CDE shall use this additional time to thoroughly evaluate the data forensic outcomes from the initial administration before adjusting or finalizing the data forensics protocol for Colorado's assessments. This additional time also shall allow CDE an opportunity to put in place (or to evaluate existing) procedures related to receiving and interpreting results from data forensic analyses. Assuming that a data forensics protocol is approved by CDE and finalized following the initial administration, data forensic analysis outcomes shall be delivered closer to the end of the administration window in subsequent years.

All data forensic analysis deliverables shall be provided in a secure manner in the form of electronic summary files, with flagged students, classrooms, schools, or districts clearly indicated. In addition to data forensic analysis summary files, the Contractor shall provide technical documentation in the Technical Report explaining the specific methods and flagging criteria used in the analyses as well.

A.9.8.   <u>Contractor Research Services for Colorado's Assessment Programs</u>.

In addition to test development delivery, the Contractor shall provide expert advice and judgment in support to CDE's leadership position. The Contractor shall bring the resources and expertise of its group of experts and any required national expert consultants to bear on the design and implementation of new assessment programs requested by CDE. The Contractor shall assemble a Colorado Research Alliance to assist CDE in addressing issues associated with post-secondary and workforce readiness and to respond to changes in federal legislation, including the Elementary and Secondary Education Act (ESEA), and/or the implications of Common Core Standards and peer review documentation requirements.

In this alliance, the Contractor shall collaborate with both national experts and Colorado experts in the area of assessment. This group shall serve as an external advisory group to CDE and the Contractor shall design and conduct specific research studies in conjunction with CDE at no additional cost to the state.

Suggested members of the Colorado Research Alliance are presented in Attachment 3. CDE will have final approval of membership.

A.10. Training and Support

A.10.1.   <u>Work Plan</u>. The Contractor shall maintain the Colorado Student Assessments foundation in test design and scoring, to build upon current policy and practice and reduce confusion during the transition. The Contractor shall provide clear and concise training materials for educators that may be discussed in a group meeting or studied alone on a computer or read in hard copy. The Contractor shall provide training to educators in the spring of 2013. Each year, the Contractor shall review this training and revisions shall be made based on feedback from CDE, teachers, and stakeholders. The Contractor shall provide robust call center support for teachers with questions about the assessment and the process for submitting evidence sent to the schools. The Contractor shall adhere to the mutually agreed upon detailed schedule that outlines the tasks and durations for each year of the Contract. The draft schedule is included in Exhibit B.

A.10.2.   <u>Training</u>. The Contractor's program team (including their technology consultant and psychometrician) shall develop draft training materials (hand-outs, PowerPoint slides, manuals) for CDE review, revision, and approval. . A month prior to in-service training, CDE shall receive training materials such as manuals, PowerPoint presentations, and handouts. The Contractor shall preview each training session and webinar for CDE staff at least two weeks prior to the scheduled training dates and make any necessary changes to the training materials before use. All trainings sessions will include oral and visual presentations and will incorporate interactive technology as appropriate. Training content and materials shall be approved by CDE before use.

For all face-to-face trainings the Contractor shall be responsible for all logistics and shall verify that facilities meet Americans with Disabilities Act (ADA) accessibility requirements. The Contractor shall ensure the provision of all training accommodations that are required by the ADA. All WebEx trainings will be archived and available for future use or reference.

The Contractor's Program Manager shall be available to assist CDE with test preparation and interpretation in-service training.

The follow table represents the trainings for which the Contractor will be responsible:

Colorado Summative Trainings							
Meeting Title	TAC Members	CDE Staff	Pearson / ETS Staff	Educators	Meetings per year	Number of Days	Face-to-Face or WebEx
Assessment Administration Training	-	2	2	Minimum of 50 No more than 120	4	1	Face-to-Face in FY14 (WebEx in FY15+)
Technology Director Training	-	2	2	Minimum of 50 No more than 120	4	1	Face-to-Face in FY13-FY14 (WebEx in FY15+)
Understanding the Assessment Results Training	-	2	2	Minimum of 50 No more than 120	4	1	Face-to-Face in FY14 (WebEx in FY15+)
Test Readiness Tool Training	-	1	2	-	4	1	WebEx
Site Readiness Training	-	1	2	-	4	1	WebEx
Additional training: Topic to be determined annually	-	1	2	-	4	1	WebEx
Initial Item Development Meeting	-	4	7	18	1 (FY13 only)	3	Face-to-Face
Item Development Meeting (Item Writer Workshops)	-	4	6	18 (12 for ES/MS & 6 for HS)	4 (2 for ES/MS & 2 for HS)	2	Face-to-Face
Content and Bias Review	-	4	7	30 (20 for ES/MS & 10 for HS)	2 (1 for ES/MS & 1 for HS)	2 (3 in FY13)	Face-to-Face
Range-finding Meeting	-	4	7	30 (20 for ES/MS & 10 for HS)	2 (1 for ES/MS & 1 for HS)	3	Face-to-Face

Colorado Summative Trainings							
Meeting Title	TAC Members	CDE Staff	Pearson / ETS Staff	Educators	Meetings per year	Number of Days	Face-to-Face or WebEx
Anchor Validation Meeting	-	4	7	N/A	2 (1 for ES/MS & 1 for HS)	1	WebEx
Initial Data Review	-	4	6	30 (20 for ES/MS & 10 for HS)	1 (FY14 for EI/MS and1 for HS)	1	Face-to-Face
Annual Data Review	-	4	6	20 (no stipend)	2 (1 for ES/MS & 1 for HS)	1	WebEx
Cognitive Labs	-	3	5	9 (no stipend)	2 (FY13 only)	5	Face-to-Face
Standard Setting	-	5	12	60 (40 for ES/MS & 20 for HS)	2 (FY14 for EI/MS, FY15 for HS)	3	Face-to-Face

A.10.2.a. Technology Director Training.

Detailed training sessions shall be conducted for the Colorado Technology Directors. The Contractor shall provide a series of online training sessions that include live WebEx sessions. The Contractor shall also provide static online materials to be available for on-demand review. The WebEx training sessions shall be recorded and posted online as well. Training sessions shall include 1.) PearsonAccess™ (the online test management system); 2.) technology readiness tools and procedures; 3.) proctor caching tools; 4.) school network configuration and online system testing (site readiness); and 5.) TestNav training. The Contractor's in-state technology consultant shall oversee the development of all training materials and provide on-site support for these training sessions.

A.10.2.b. Assessment Administration Training for DACs. The Contractor's training shall focus on the ordering and receipt of materials in the district, the distribution of materials within the district, collecting materials for return to the Contractor, administration of assessments, and the policies and procedures for maintaining security at all times. The training shall also include the DAC's role in online administrations and security procedures related to online testing. Training sessions shall be recorded and archived for use in potential future training or reference resource. The Contractor's assessment manuals shall include the same types of information.

The Contractor shall supply online and conference call opportunities to provide training for those unable to attend a live session and to reinforce training for those who did attend. The Contractor shall provide online training using WebEx conferencing. Training sessions shall be delivered prior to each Colorado Student Assessment administration: one training session prior to the fall

administration and up to three training sessions prior to the spring administration. Each training session shall include material on test administration and technology issues.

The Contractor's WebEx training shall include a "live" simulation of a loss of connectivity. This shall allow participants to see what happens and how to deal with such an occurrence. In the live online training environment, participants shall be able to ask questions and share experiences. WebEx presentations shall be recorded and posted online for use in school-level training.

The Contractor shall update each presentation four weeks prior to each Colorado Student Assessment administration. Updates shall show new functionality in the online system since the last administration, any changes since the last administration, and hot topics for online testing.

A 10.2.c. <u>Assessment Administration Training for SACs and Test Administrators</u>. The Contractor shall create training materials and provide customer support specific to online assessment. The Contractor shall collaborate with CDE to determine additional training that may be needed, given changes in the summative assessment program and challenges in administering the Colorado Student Assessments. The Contractor shall obtain CDE approval of manual, WebEx (or other online service) presentations, and CD contents before producing the supplemental training instrument. CD contents shall include Microsoft® PowerPoint® presentations in Windows® and Macintosh format, forms that participants can print, and other materials. CDs will be produced for each DAC and SAC. These materials may be used by DACs and SACs for training of district and school staff.

A.10.2.d. <u>Understanding the Assessment Results Training</u>. In conjunction with the development of the Interpretive Guide, The Contractor shall develop training sessions to support analyzing and understanding local data in order to inform curricular and instructional improvements at the classroom, school, and district levels. These sessions shall include a visual as well as an oral presentation and may include other types of interactive technology. Training sessions shall be recorded and archived for use in potential future training or as reference resources.

A.10.2.e <u>Additional Training</u>. Contractor shall provide an annual in-service training session to teachers regarding an important assessment issue, to be mutually determined by CDE and by Mr. Jim Hill.

A.11. Customer Service

The Contractor shall provide technical and logistical support in a responsive manner which minimizes school personnel and student burden, disruption and inconvenience.

A.11.1. <u>District Assessment Coordinator Routine Communications/Notifications</u>. The Contractor's program management team for the Colorado Student Assessments shall work with CDE to determine the types of communications and notifications that should be directed to the DACs. The communications shall be provided to CDE for sending via listserv that is currently in use.

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A.11.2. <u>Telephone and E-mail Support</u>. The Contractor's Customer Service Center (CSC) personnel will be trained specifically for the Colorado assessment program. Customers will have access to live support via email and a dedicated toll-free phone number from 7:00 a.m. to 6:00 p.m. Mountain Time each weekday, excluding federal and Colorado state holidays. Customer service personnel must be able to clearly articulate spoken English. The customer service center must be located within the 48 contiguous states. CDE reserves the right to approve the Customer service lead.

When customer service staff is not available to take a call, a voicemail service system must be available to record the caller's message. Messages must be returned in a timely manner, generally within one hour or less but always within one business day.

DACs may also submit questions via e-mail to the Project Manager and must receive a response to their e-mail within 24 hours.

A.11.3. <u>Issue Resolution System</u>. Customer service staff shall have a system to ensure that issues raised by DACs have been satisfactorily resolved. For example, if a DAC has requested additional assessment materials, the system shall ensure that 1) the DAC is given instructions on how to order the materials online and that 2) the customer service representative will verify that the order has been placed and fulfilled. The Contractor shall notify CDE of any communication with the field regarding urgent or sensitive issues. If an issue arises that requires executive engagement and authority for resolution, Contractor's internal issue response process will provide proper guidance to Contractor personnel. This process allows for the evaluation of corrective actions by Contractor leadership and tracks the issue through closure. Contractor's Program Manager will keep CDE aware of the issue and how it is being resolved.

A.11.4. <u>Records of Interaction with Customers</u>. All contacts shall be tracked by the HP Peregrine Service Manager, a secure incident-tracking software tool tailored specifically for Contractor's Customer Service Center (CSC). With each incoming contact, CSC staff will generate a ticket that enables tracking the incident through to resolution. The system will collect customer name, district, school, date and time of incoming contact, issue description and resolution, and date and time of issues and resolution. Tickets will be archived and ticket numbers will also be provided to the customer. Tickets may be escalated to specialists for their documentation when handling calls to generate a full history of each issue. Sortable reports from the Contractor's incident tracking system will be available to CDE for review in electronic format.

A.11.5. <u>Customer Service Initiated Calls and Communications</u>. All Colorado-specific training for CSC, including any scripts, shall be drafted and provided to CDE for final approval. Additionally, customer service staff may be asked to initiate e-mail communications in unusual circumstances by CDE.

A.11.6. <u>Customer Feedback Survey</u>. The Contractor shall create and administer at least once annually a customer feedback survey, including both close ended and open ended items. The survey will record feedback on customer satisfaction with ordering, fulfillment, security, receiving, returning, customer service, TestNav functioning and other criteria consistent with best business practices. The Contractor will be responsible for compiling responses. The feedback surveys will be available to CDE for review, as well as to be

used in planning for the next year's program. Annually, Contractor will also survey CDE decision makers reviewing its products and services.

A.11.7. <u>DAC Website</u>. The Contractor shall develop and maintain a website for DACs via Contractor-provided login names and passwords to access training and assessment materials. This website will contain both secure and unsecure documents necessary for the DACs to perform their duties and responsibilities. These documents include proctor and coordinator manuals, training manuals, accommodations manuals, data interpretation manuals, as well as various order and request forms. In addition, the site shall provide DACs with access to their district assessment data and scores.

Contractor's web access management solution will be rules-based, allowing or denying access based on definable user attributes. This propriety web accessed tool, PearsonAccess™, will be configured according to Colorado requirements and access privileges for individuals or groups of users at the state, district, and school levels.

A.11.8. <u>Customer Support</u>. In addition to the "help" functions embedded in the assessment software and automated online or phone in support services, the Contractor shall provide customer support for the installation and use of the online assessment software that includes phone accessible support personal.

The Contractor's staff members in the CSC will be trained on the specifics of the Colorado program. Callers from Colorado will have access to live support via email and a dedicated toll-free phone number. The Contractor's specialists with detailed program information and focused expertise in the database, network, infrastructure, and software components of the Contractor's web-based services will respond to questions that cannot be resolved at the initial point of contact.

B. Alternate Assessment

B.1. General Requirements

Educator Meetings. For all meetings held with Colorado educators, the Contractor is responsible for all costs. This includes all expenses for Americans with Disabilities Act compliant meeting sites, including sign language interpreters and large print as needed; audio visual equipment; internet connections; beverages; snacks; and for all day meetings, lunches. If overnight stay is required, hotel rooms will be billed directly to the Contractor. Each educator receives a stipend or the district is reimbursed for the cost of hiring a substitute at the district's rate during the educator's absence. In addition, educators are reimbursed for travel expenses (mileage, tolls, etc.) and meals during overnight stays. The State of Colorado periodically develops a chart for reimbursement rates. The Contractor shall reimburse attendees based on the state reimbursement rates current at the time of the meetings. The table below presents expenditures for reimbursement.

Educator Meeting Reimbursement

	Description
Stipend or Substitute Reimbursement	$120 stipend if a non-work day for the educator **OR** reimbursement of district for hiring a substitute at the district's rate
Meal Expenses	The per diem rate will be set at the current state (CO) rate at the time of the event. It is only granted to participants who come from out of the local area and who will remain overnight in a hotel provided by the Contractor. See below for more information.
Mileage	Mileage rates will be set at the current state (CO) rate at the time of the event See below for more information.
Lodging	Lodging shall only be provided for participants who travel more than 35 miles in one direction to attend the event. Government rates will be applied. See below for more information.
Airfare/Rental Cars/Cab Fares	Airfare, rental cars, or cab fare shall be provided for participants for whom these means of travel would be less expense than if they drove.

NOTE: For current Colorado rates, see: http://www.colorado.gov/cs/Satellite/DPA-DCS/PA/1201542229293

Throughout this document, the term "Contractor(s)" is also assumed to include subcontractors where appropriate and applicable.

B.1.1.   Professional Standards/Best Practices. The Contractor shall ensure that all materials, practices and procedures developed under this Contract for the Colorado Alternate Assessments (CoAlt) meet relevant professional standards such as those contained in the Standards for Educational and Psychological Testing published by the American Education Research Association (1999 or most current version), and the various guidance and checklist documents published by the Council of Chief State School Officers, such as the Quality Control Checklist for Item Development and Test Form Construction, particularly in terms of privacy, reliability, validity, opportunity to learn, accommodations, scoring, reporting, and documentation.

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The Contractor shall inform CDE when implementation practices or policies are not consistent with the best educational research and practice. The Contractor shall be responsible for clearly communicating the risks of proceeding outside of conclusions of best educational research and practice standards. If CDE elects to proceed, the Contractor shall work to make necessary corrections and design appropriate mitigation strategies.

B.1.2. State and Federal Requirements. The Contractor shall ensure that all materials, processes, and procedures developed under this Contract meet relevant State and Federal legal requirements, including requirements under the Elementary and Secondary Education Act (ESEA) and peer review, as well as the Individuals with Disabilities Education Act (IDEA). Throughout the life of the Contract, and any extensions, the Contractor shall communicate to the State when it concludes that the program is no longer meeting State and Federal requirements and shall provide corrective options to the State for consideration.

B.1.3. Communication. The Contractor shall assist CDE in explaining to the media, the public, stakeholders, the court, and/or other applicable entities why the tests are valid and reliable assessments that are appropriate for their intended purpose. The Contractor shall collaborate with CDE to develop external communications materials for the Colorado alternate assessments to promote understanding and acceptance for the new alternate assessments.

These external communications materials include, but are not limited to, interpretive guides which will accurately communicate information in clear language for parents, teachers and other stakeholders, related to cut scores, proficiency levels and descriptors and scale score, including how they work, why they are important, and how they can be properly interpreted. The interpretive guide will show educators how to extrapolate and use test results to support instructional plans.

The Contractor shall use brochures, PearsonAccess™, group training sessions, face-to-face meetings, or other requested formats to make assessment results available and understandable to all stakeholders. This includes helping CDE provide information to the media and to technical advisory committee members, or similar groups, for the purposes of accountability and public release of testing information.

B.1.4. Cooperation with Quality Control Contractor and CDE Staff. CDE intends to contract separately with a third party quality control contractor for all of its assessments. The quality control contractor will review the Contractor's work, meet with the Contractor's staff, and conduct on-site visits at all of CDE's Contractor's facilities to assure CDE that 1) the Contractor meets required schedules and quality control requirements and performs services in accordance with contractual requirements; and 2) file exchanges are properly coordinated. While working within its corporate guidelines for maintaining security of its facilities, its other clients, and confidentiality of student information and data, the Contractor will cooperate with the quality control contractor and CDE staff to provide access to relevant facilities, personnel, and information regarding services provided hereunder.

B.1.5.   Interaction with Verification Contractor. CDE may contract separately with a third party verification contractor on an on-going or periodic basis. The Contractor will be required to share information regarding item parameters; data files (including scan files and command files); and any other information needed to verify the reliability, validity, and quality of the Colorado assessment data and system.

B.1.6.   Security. The Contractor shall follow FERPA, state and industry standard security policies, including the provision of confidentiality agreements for all Contractor staff, subcontractors and educators participating in any aspect of this project.

The following table provides an overview of the security protocols for Colorado student assessments and the entities that will assume primary responsibility for implementation.

Security Protocols for Colorado Student Assessment System				
Security Protocol	Pearson Staff	CDE	Committee Participants	District Personnel
Sign Security and Confidentiality Agreements	✓	✓	✓	✓
Deliver Security Plan	✓			
Arrange Meeting Logistics to Accommodate Security Requirements	✓			
Maintain Physical Control and Access by Authorized Personnel	✓			✓
Provide Use of Secure FTP Site for File Transfers	✓	✓		
Serialize Field Test Forms	✓			
Shrink Wrap Test Materials	✓			
Provide Secure Delivery and Check-in	✓			✓
Provide Secure Retrieval from Schools	✓			✓
Account for Returned Test Materials	✓			
Confirm with Schools Receipt of Returned Materials	✓			
Provide Weekly Reports for Return of Test Materials	✓			
Do Not Utilize Email or FAX for Transmission of Secure Materials or Information	✓	✓	✓	✓

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Security Protocols for Colorado Student Assessment System				
Security Protocol	**Pearson Staff**	**CDE**	**Committee Participants**	**District Personnel**
Limit and Monitor Photocopying	✓	✓		✓
Print Security Statement on Test Forms and Directions	✓			
Provide Secure Destruction of Materials Used During Committee Meetings	✓			
Provide Secure Destruction of Test Materials Upon Colorado Approval	✓			
Provide Secure Delivery of Colorado-Owned Outputs Upon Colorado Request	✓			
Provide Secure Transfer of All Colorado-Owned Items, Reports, Materials, Data, and Equipment Necessary for Transition	✓			

Any breach of security that occurs through the negligence or inaction of the Contractor, such as, but not limited to, failure to adhere to the Contractor's security protocols or allowing raters to remove secure materials from Item Writing Meetings, Item Review Meetings, Data Review Meetings, Anchor Paper Selection, Validation Meetings, or the Scoring Center, will be considered a default on the terms of this Contract.

The Contractor will be required to sign the FERPA Confidentiality Agreement.

Commitment to Stringent Security

The Contractor's Global Information Security and Technology policy shall be implemented by the Contractor's business unit leaders in collaboration with the Director of the Data Security and Business Continuity (DSBC) team. The DSBC shall implement policy and verifies compliance through appointed data security/privacy officers located in all of the Contractor's facilities. Specific focus areas include policy guidance, security procedure training, access and transmission controls, audit activities, and resolution of security issues.

Established and Secure Facilities

All of the Contractor's facilities shall be closed to the general public. Reception areas shall be staffed, and access beyond the reception area shall be restricted, as it shall be with other building entrances. Guards shall be posted at other key entrances where security officers monitor building access directly and via a closed circuit television system. Building access shall be controlled by a proximity card access system. Employees and contractors shall be issued magnetized, photo ID badges after signing a statement accepting responsibility for its proper use. While in the Contractor's facilities, personnel shall be required to wear the security badge in unobstructed view at all times. Visitors to the Contractor's facilities must be approved by a manager, escorted by the Contractor's staff, and wear date-specific badges.

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Information about Security Awareness

The Contractor shall continue its Security Awareness Program, an ongoing effort that provides guidance to every employee so they understand company security policies, their individual responsibilities for compliance, and how their behaviors affect the Contractor's ability to protect systems and data. These efforts are built on the principles of confidentiality, integrity, and availability. Security awareness begins immediately with new hire orientation, covering acceptable use of the Contractor's systems, fundamental best practices such as creating strong passwords, proper use of email and Internet access, and responsibilities in reporting security risks. The Contractor's employees shall be required to complete a web-based training module within 30 days of hire.

Specific online courses covering PCI compliance and protecting PII have also been developed. The Contractor's awareness training shall also include an annual refresher course that includes components on these topics. Contractor's security policies, security training, newsletters, and printed content shall be available on the Security Department intranet site. It provides a central repository for security content and efforts and is available to everyone in the company. Links to this site are incorporated in most of the Contractor's other business specific Intranet sites.

Employee Handling of Test Materials

The Contractor's test-development methodologies prevent the listing all of the employees who will develop and process CoAlt materials; however, the Contractor stipulates that only employees explicitly assigned to the project handle testing materials, and that these employees will be required to complete a standard Pearson nondisclosure/security form completed by all employees.

Confidentiality Agreements

During item development and item review, range finding and anchor validations, as well as standard setting, the Contractor will have all participants sign a confidentiality and nondisclosure agreement. The Contractor will communicate security protocols to all participants. Participants will not be allowed to remove material from the meeting room during any development or review sessions nor will they be allowed to use personal computers, cell phones, or other communication devices within the meeting environment.

Secure FTP Site for File Transfers

The Contractor will develop and maintain a secure file transfer protocol (SFTP) site for the duration of the Contract and any future amendments. This site will be fully-encrypted and allow for secure transfer of documents between the Contractor and CDE, and any third party vendors. The Contractor will not utilize email or fax for transmission of secure materials or information.

User IDs and Passwords

The Contractor's security module will provide administrative user authentication and authorization services. CDE will be provided control of administrative security features, including: persons allowed to access the system; what level of the system (state, system, school) each user can access (customized to match the naming convention for levels used by CDE); and which administrative functions (enrollments, student data management, order tracking, viewing reports, etc.) each user is permitted to access.

Secure Materials Assembly

To maintain test booklet security, the Contractor will perform the pre-packaging and assembly processes in accordance with CDE requirements and its standard security procedures. Only designated, authorized persons will have access to test materials before and after their scheduled use. All security processes described in the following sections work in concert with Oracle's system inventory controls to produce accurate packing results and inventory traceability. The Contractor will check materials to verify that they have been accurately printed and collated, wrap test booklets into sub-assembly components of a predetermined number of documents and identify them using unique package barcode identifications, and perform a quality check during packaging to verify that the item counts listed on the packing lists correspond with the actual test booklets being packaged. At the packing line, scanners will prompt the packing personnel for which item to scan, in the order in which it must be packed. The Contractor's packaging and distribution system will use custom technology to verify packaging and distribution accuracy through barcode scanning of individual testing materials to their specific shipping container.

Secure Delivery of Test Materials

The Contractor's plan for the distribution and return of materials will focus on maintaining test security, providing accurate handling of all test assessment materials, and delivering these materials to the participating districts in a timely manner. The Contractor's experienced warehousing and transportation departments will maintain the quality and security of material distribution and return materials by using such methods as sealed trailers and hiring reputable carriers able to quickly trace shipments.

Accurate Handling and Timely Delivery

To maintain test security, accurate handling, and timely delivery, the Contractor will create a transportation file consisting of requested quantities of each material type (secure or non-secure) for each participating school within each district. Calculated overages may be provided to large Colorado districts. The Contractor will identify appropriate shipping modes based on shipment size and destination. The Contractor will verify shipping addresses for validity according to carrier files.

Materials will ship directly to the district assessment coordinators responsible for distributing testing materials to the schools, arriving at least two weeks prior to testing. The Contractor will also use its distribution system's tracking capabilities to provide precise status information and corrective action. As secure materials are returned, the Contractor will compare the barcodes of the documents sent to a district to those returned from a given location. The Contractor will provide regular updates to CDE on the status of any unreturned secure materials. The Contractor will generate and deliver a report of any unresolved missing materials to CDE after the scoring window has closed, and after the Contractor has made every effort to locate any missing materials.

Inventory Security

The Contractor will use its automated material inventory system, located within secure warehouse facilities, as the primary security system for all test materials following development (test booklets, test sections, and Supported Performance Task manipulatives). The inventory system will provide an accurate control process that supports the controlled shipment and return of test materials.

Secure Destruction of Materials

The Contractor will provide for the secure destruction of all materials used during test development, committee meetings, and field testing. Annually, the Contractor will provide secure destruction of secure unused test materials six (6) months after the end of the test window, with written permission from CDE. Additionally, the Contractor will provide secure destruction of used test materials twelve (12) months after the test administration window closes, with written permission from CDE.

Solid Security for Colorado

The Contractor will follow stringent procedures in the event of any major data security breach. The Contractor will respond quickly to any suspected breach. Actions the business must take promptly after an actual or suspected breach include the following to contain the breach and investigate the cause:

Determine timing requirements:

○ Promptly record all information relevant to the breach, including the cause and effect of the incident and determine whether other systems are at serious risk of future breach.
○ Engage specialized consultants to capture relevant information and perform forensic analysis if necessary.
○ Follow prescribed legal time limits for notification of persons whose data was breached, if applicable.

Information to be collected promptly:

○ The date, time, duration and location of the breach
○ How the breach was discovered, by whom and any known details about it
○ Information on the compromised data, including: a list of affected individuals by category, data fields, the number of records affected and which, if any, data were encrypted

Analyze legal implications of the breach:

○ Analyze the relevant business contracts for notification and other obligations, breach notification requirements and pertinent indemnification agreements
○ Identify the countries potentially involved with reference to the location of persons and systems affected by the breach and statutes and regulations potentially triggered or violated by the breach
○ Contact local or federal law enforcement agencies, where appropriate.

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Working in Concert with CDE

The Contractor's program manager will work with CDE to determine final test administration procedures, including those related to security and confidentiality throughout administration. These will then be included in test manuals and incorporated into test coordinator and administrator training. In addition, a detailed plan for handling general testing irregularities will be developed with CDE that identifies potential types of irregularities, reporting and communications plans, and immediate actions to resolve or mitigate the situation.

B.1.7. Travel. As required by the RFP and agreed to by the Contractor, the Contractor will be required to travel to various statewide locations to meet project requirements/training.

All anticipated travel expenses are included in the Contract price. Therefore, the total price quoted for this project includes any travel, lodging or per diem costs to be incurred by the Contractor's personnel to provide services requested. NO ADDITIONAL COSTS WILL BE REIMBURSED.

B.1.8. Subcontractor Requirements. CDE is allowing subcontracting to occur in the scope of work. CDE will allow subcontracting only under the following circumstances:

- All subcontractors must have primary offices and complete the work within the continental United States.
- CDE reserves the right to reject any subcontractors if it so chooses.

B.1.9. CDE Sign Off. All procedures followed in the development, production, administration, scoring and reporting of the CoAlt shall be made available for review by CDE, if requested, and, as determined by CDE, may be subject to CDE approval.

B.2. Corporate Capacity and Personnel

B.2.1. Organizational Structure. Organizational charts, including identification of Executive and Key Personnel, for the Contractor as a whole and for the CDE project team specifically, including subcontractors where applicable, are provided in Attachment 1. The chart clearly indicates lines of authority and communication within and among the Contractor's departments and subcontractors, where appropriate.

The Contractor has indicated that Mr. Jim Hill, Vice President of State Services with the Assessment and Information group, will provide executive support for the CoAlt. This executive team member shall be available both during and outside of normal business hours to assist with any urgent situations. Changes to the assigned executive team member, except for those resulting from separation of services, require prior written consent by CDE. The replacement shall have qualifications which meet or exceed the original staff member proposed or the staff member holding the position previously and shall be approved by CDE.

B.2.2. Time Allocation of Key Personnel and Services. Attachment 2 presents the list of key staff with staff member's assigned responsibilities and time allocated to the project. In no case shall an individual be assigned to more than one full-time equivalent position, including work outside of Colorado Contracts.

The Contractor shall assign one person to function as the Program Manager. That person must be responsible for all activities required by the project and will serve as the main contact person between the Contractor and CDE. The Program Manager shall have the authority to make decisions and commitments on behalf of the Contractor, subject to CDE approval.

CDE reserves the right to interview and approve all key staff. Throughout the life of this Contract, and any extensions, changes to the assigned program manager, program coordinator, lead psychometrician, content development lead, content specific area lead, and special populations consultant, except for those resulting from separation of services, will require prior written consent by CDE. In the event that CDE requests removal of specific Contractor personnel, the Contractor shall provide acceptable replacement(s) with no impact to the project. Replacement(s) shall have qualifications which meet or exceed the original staff member proposed or the staff member holding the position previously and shall be approved by CDE.

All personnel who will work on-site at CDE or school sites may be required to be pre-approved for site access via a criminal background check paid for by the Contractor.

B.2.3. Staff Qualifications and Experience. CDE requires that the Contractor's psychometric team will not only execute routine functions, but will also provide expertise to guide the psychometric decisions that will need to be made and re-evaluated as the program evolves. The team shall provide psychometric options with strengths and challenges and its recommendations along with rationale. In addition, the team must include personnel with both extensive experience and psychometric knowledge, as well as the decision-making authority to quickly address and remedy the unexpected challenges.

For all meetings involving educators, facilitators must be familiar with best practices, state and federal laws, procedures, and regulations concerning assessment. Facilitators must also be familiar with academic instruction of students with significant cognitive disabilities and the educational and assessment landscape. Facilitators must be able to clearly articulate spoken English and create user-friendly written materials and visual training aids. Facilitators must have demonstrated successful experience in leading large-group trainings including webinars and meetings as fit their responsibilities. CDE reserves the right to not accept any training and meeting facilitators identified if it so chooses.

B.3. Program Management
B.3.1. Key Activities and Transfer Dates.

B.3.1.a Schedule of Activities. The Contractor shall adhere to the CoAlt Project schedule with key activities and milestones related to the field and key transfer dates between the Contractor and CDE related to development, production, shipping and receipt, administration (of paper-based and online assessments), scoring (data processing, reporting and psychometric activities). The draft schedule is included in Exhibit B. The deliverables presented in Exhibit C shall be subject to liquidated damages.

B.3.1.b Project Schedule. The Contractor shall follow the baselined project schedule presented to CDE at the beginning of each development cycle that identifies the

tasks, subtasks, beginning date, end date, party/functional group responsible for each step in the process, dependencies, detailed hierarchical task descriptions, critical milestone designations and early trigger and milestone identification. The schedules shall be integrated, regularly reviewed, updated, and made available to project stakeholders in a clear and understandable format. The overall schedule shall be incorporated into the comprehensive project management plan. Management of the master schedule shall include identifying and communicating tasks and deliverables, tracking and communicating progress, evaluating the status and availability of resources, and identifying project and program managers, resource managers, team members, and executives.

The Contractor's project schedules shall be developed with MS Project® software, according to a clearly defined and highly integrated process. CDE schedules shall be carefully monitored by the program team to verify that resources will be available when they are needed. Assessment projects shall be run according to schedule. The Contractor shall use its standard, comprehensive work breakdown structure (WBS) as the basis for every assessment schedule. The WBS is extensive and detailed, featuring every common element of work that the Contractor and CDE performs to fulfill the requirements of an assessment projects. The WBS and/or the CoAlt Program Deliverables and Obligations shall be carefully managed throughout the project to keep track of schedule elements. All Contractor team members shall be required to submit weekly updates to the CoAlt project manager. Any variations in scheduled start dates or projected task durations shall be seen immediately by the CoAlt project manager and appropriate corrective action shall be initiated without delay.

The Contractor and CDE shall jointly monitor the schedule on an on-going basis. The Contractor shall ensure that all schedule adjustments requested by the Contractor allow for final deliverable dates to be met. If necessary, timelines and schedules may be revised with prior approval by CDE and by an executed contract amendment for all deliverables subject to liquidated damages. A revision of the Contractor's timeline shall exempt the Contractor from meeting a contractual deadline **only if** (1) the Contractor and CDE mutually agree upon and document through a contract amendment an extension of the deadline as executed through a contract amendment or 2) the Contractor is able to prove that the deadline was not met due to CDE's failure to meet a contractual deadline resulting in the Contractor's inability to adhere to the schedule for delivery of products and services.

The Contractor shall alert CDE as soon as it believes that a deliverable subject to liquidated damages is at risk of not meeting its delivery date. CDE must be notified whenever the Colorado Contract is included in the Contractor's internal meetings focused on programs at-risk.

B.3.2. Program Management Communication and Reports.

B.3.2.a On-going Communication. The Contractor shall engage in on-going communication with CDE. Telephone calls, telephone conference calls, emails, overnight courier service, facsimile correspondence, and other communication procedures will be at the Contractor's expense. The Contractor shall provide

toll-free numbers for telephone communication including conference calls and webinars.

B.3.2.b <u>Timeliness of Communication.</u> The program management team shall return calls from CDE staff and respond to email messages within 24 hours. If the program manager is not available to take calls and return messages, CDE shall be notified in advance. In the event that a member of the Program Management team is not available, the Contractor shall notify CDE as to whom to contact in his or her absence, and shall provide contact information for such individual. The program manager shall use multiple means to maintain constant and ongoing communications with CDE: email, cell phones, SFTP sites, faxes, conference calls, WebEx conferences, and other means that support the immediacy or urgency of the communications topic, as well as regularly scheduled communications meetings. The program manager shall be responsible for ensuring that the appropriate members of the Contractor's team are available for or participate in such communications. The program manager and the Contractor's program team shall maintain records of all meetings, minutes, or summaries, including those with subcontractors and make those available to CDE upon request.

CDE shall participate in meetings and trainings as appropriate or as required. To keep CDE fully informed, the Contractor shall use standard communication (phone and e-mail), direct access to the Contractor's leadership, and online access to calendars and schedules. These methods of communication will be employed to make decisions and provide information to various CDE constituencies. Executive level issues shall be immediately referred to Mr. Hill.

B.3.2.c <u>Weekly Meetings.</u> At a minimum, the Contractor shall schedule weekly conference calls and reports with CDE at a designated time. Program details shall be discussed, including requirements, the schedule, issues, and work updates. As the need arises, other periodic or on-going conference calls may be conducted. From each conference call, an updated issue log will be created noting a discussion summary, action items, information needed for program success, dependencies, and key dates from the schedule. The Contractor shall distribute this report to CDE and throughout its company. This report shall be submitted to CDE within two business days of the conclusion of each meeting.

B.3.2.d <u>Project Meetings</u>. The Contractor shall be responsible for the coordination, support, and expense of regular management meetings with CDE's assessment director(s) and team. For the contract period running through June 2014, the Contractor shall hold monthly planning or work sessions to confirm that all baseline and start-up details are being closely monitored and on-track. Four (4) of these meetings shall be hosted at the Contractor's facilities and the others shall be held in Denver, CO. The Contractor shall prepare draft agendas for CDE review and approval and shall verify that appropriate members of the Contractor's teams attend in person or are available via electronic meeting technologies.

For each of the remaining fiscal contract periods, through August 30, 2017, the Contractor shall meet with CDE every other month (six (6) times annually), with three (3) of these meetings in Denver and three (3) at the Contractor's

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facilities. The Contractor shall confirm appropriate attendance by pertinent team members. CDE shall be responsible for the costs for its staff to travel to the Contractor's location.

The Contractor's project management team shall collaborate with CDE to identify topics for each meeting. The Contractor shall provide a draft agenda for each meeting to CDE for review. The program manager shall work with the CDE to develop general formatting and content guidelines for the meeting agendas.

In addition to the in person meetings, the Contractor shall coordinate management meetings via WebEx or teleconferencing through a toll-free number. The Contractor shall be responsible for providing written documentation for all meetings with special attention given to deliberate decisions, actions required, and personnel needed for follow-up. This documentation shall be submitted to CDE within two days of the conclusion of each meeting.

The Contractor shall organize several additional meetings throughout the year. For all meetings—including, but not limited to management meetings, item reviews, alignment studies, range finding meetings, standard settings, and technical advisory groups—the Contractor shall take minutes and make a record of participants, including institutional affiliation and contact information. The Contractor shall provide all minutes, records, and lists of participants to CDE for review and approval within two working days after each meeting. The following figure shows more details about the Colorado Student Assessments face-to-face meetings.

Colorado Alternate Assessments Project Meetings					
	TAC Members	CDE Staff	**Pearson** Staff	Meetings Per Year	Number of Days
Technical Advisory Committee (State TAC)	1 (4 from summative)	2	2	3	2
Contract Kick off Meeting		2	8	1 total (Upon contract award)	2
Annual Planning Meeting		2	4	1	2
Planning/work sessions		2	4	12 (Fiscal Years 1 - 2) Dependent upon contract extension:6 (Fiscal Years 3, 4, 5)	2
Quarterly Upper Management Project Meetings		2	1	4	1

Additional Contractor staff shall be available as necessary.

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CDE shall be responsible for the costs for its staff to travel to the Contractor's location.

B.3.2.e   Monthly Reports. The Contractor shall provide a monthly report to CDE. The monthly reports shall address important issues affecting the Colorado Alternate Assessments and provide the information that CDE needs to maintain close oversight. Each report shall include information on items such as the following:

- Unanticipated difficulties and proposed solutions
- Feedback from the CDE districts and schools
- Discussion of unresolved topics
- Decisions needed from the CDE
- Status of tasks in progress as compared to the baseline schedule
- Anticipation of key decisions and issues affecting those decisions
- Preparations for upcoming tasks/events
- Potential impact of specific actions

The monthly report shall also include a detailed list of invoices submitted for payment and a history of invoices previously submitted. These reports shall be sent monthly to CDE by the third business day of the following month.

B.3.2.f.   District Assessment Coordinator (DAC) Academy. The program manager and her program coordinator for the CoAlt shall attend the annual DAC Academy. They will either travel to Denver prior to one of the in-state project meetings or will remain in Denver following the project meeting in order to be present.

B.3.2.g.   District Assessment Coordinator (DAC) Management Meeting. The program manager, project manager and/or the program coordinator shall attend the two DAC management meetings each year. They will gather input from the DACs regarding any suggestions for changes to administration procedures or practices. Any changes suggested by the DACs will require CDE approval before implementation.

B.3.2.h.   Program Improvement Plans. The Contractor shall use feedback garnered from pre-test, mid-assessment, post-test workshops, the program review, educator meetings, and yearly performance evaluations to improve all aspects of the CoAlt. Based on feedback from Colorado educators, DACs, and CDE, the Contractor shall identify solutions for improvement via Post Phase Review meetings, provide a plan for improvement based on "lessons learned," at each planning meeting allow for time on the agenda to discuss CoAlt improvements, identify training needs based on feedback from educators and with guidance from CDE, and collaborate with CDE on technology capabilities.

For each phase of the program including development, production, shipping, and receipt, administration of paper-based assessments and online scoring, security scanning, data processing, reporting and psychometric activities, the Contractor shall provide a report that addresses the relevant phase by detailing the activities completed and by providing recommendations for improvement for the next assessment cycle. The report shall also detail errors, problems, and/or discrepancies by district and by school. The Contractor shall prepare a comprehensive report detailing the annual assessment cycle and providing recommendations for changes and improvements. This report shall incorporate

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feedback from a range of Colorado constituents, the TAC, and members of the Contractor's project teams, allowing CDE to fully analyze such recommendations before making decisions or adjustments. This report shall be completed within one month of completing the relevant phase. Final approved decisions will be incorporated into the next year's project plan and communicated to the full project team.

B.3.2.i. <u>Quality Control and Sign-offs</u>. Reviews and signoffs for all deliverables shall be documented and available to CDE upon request. The quality control plan shall be finalized in conjunction with CDE and will incorporate responsible entities, timelines, staff involved in the quality control procedures at each phase and deliverable of the project and CDE involvement in sign-off and approval at various stages.

B.3.2.j. <u>Invoices</u>. The fiscal year term for Colorado begins on July 1 and ends on June 30. The Contractor shall submit invoices according to the procedures and requirements set forth by CDE. The Program Management Plan will include invoice dates to reflect that, for each fiscal year, invoices are to be submitted quarterly, plus one final invoice. Invoices are to cover work, services, and deliverables provided during the period. Final invoices for each fiscal year shall be submitted by June 15 and the final invoice for each assessment cycle will be submitted by September 1 of each year.

B.3.3. <u>Transition</u>. The Contractor shall assist CDE with all activities required to transfer all assessment documents and materials during the two transition phases. The Contractor's staff will work with Colorado's current contractor to confirm that all existing Colorado assessment materials are transferred on time and that the materials retain their intended content and formatting. The Contractor shall perform a quality assurance check on material received from the existing contractor and shall notify CDE of any materials not delivered as expected.

The Contractor shall ensure that all relevant non-proprietary documents and materials, including but not limited to those identified in the following list are transferred efficiently among CDE, the current contractor, the Contractor and CDE's future contractor(s):

- Test development – all critical documents and materials used in the test development process;
- Item and test specifications – all item format details, test map requirements, test blueprints, and technical reports;
- Test books – all paper and electronic test booklets and electronic answer documents from previous test administrations; test maps for each form from the previous year's administration with keys and metadata;
- Passages and artwork – all photocopies of the original passages with source documentation, copies of contracts, original electronic art files and applicable permission information;
- Item bank, item and test statistics – all item-level metadata and previous usage statistics, available test-level statistics, previous anchor range finding papers, rubrics, constructed-response materials such as training material protocols, previous operational and field test usage of each item year and form item position status;
- Program administration – all critical documents and materials used with the test administration process;

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- General program documentation – all critical documents and materials used for general program documentation and summary reports;
- Reports – sample copies of all reports provided to districts and schools;
- Manuals/guides – sample copies of all guides and manuals (hard copy and electronic versions) for the operational test administrations, and copies of all electronic materials posted on the state website during the operational test administration;
- Scoring information – all critical documents and materials used in the scoring process;
- Scoring/reporting specifications – all documentation regarding scoring rules, aggregation rules, roll-up algorithms, and tables used to calculate student, school, district, and state results;
- Psychometric and related assessment information required for the program – all critical documents and materials used for psychometric analyses and related procedures;
- Professional development – all critical documents and materials used for professional development;
- Equating data files – all documentation that outlines layouts for files including item statistics, master file, pre-id, school/district score data and state-level score data;
- Technical reports and other validity and reliability reports - electronic copies of all technical reports produced by the contractor and electronic copies of any other reports that discuss the validity or reliability of the assessments;
- Project plan – all documents that outline the tasks/deliverables and corresponding schedule for those tasks/deliverables;
- Schedules – all previous project schedules containing dates/durations for the following tasks:
  o Developing items, forms, and materials
  o Enrollment and pre-identification
  o Packaging and distribution
  o Receiving
  o Scoring and reporting
- Packaging specifications – all documentation concerning packaging algorithms and shipping points; and
- Print specifications – all spreadsheets detailing print specifications for test booklets, labels, envelopes, and manuals.

The Contractor shall assist CDE with all activities required to transfer all assessment documents and materials during the two transition phases. Draft Transition Plans shall include procedures for the transition of documents and materials related to the following:

- Program administration – The Contractor shall ensure that all critical documents and materials used with the test administration process are transferred efficiently between CDE and/or contractors.
- Test development – The Contractor shall ensure that all critical documents and materials used in the test development process are transferred efficiently between CDE and/or contractors.
- Scoring information – The Contractor shall ensure that all critical documents and materials used in the scoring process are transferred efficiently between CDE and/or contractors.
- Psychometric and related assessment information required for the program – The Contractor shall ensure that all critical documents and materials used for psychometric analyses and related procedures are transferred efficiently between CDE and/or contractors.

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- General program documentation – The Contractor shall ensure that all critical documents and materials used for general program documentation and summary reports are transferred efficiently between CDE and/or contractors.
- Professional development – The Contractor shall ensure that all critical documents and materials used for professional development are transferred efficiently between CDE and/or contractors.

B.4. Assessment Development

B.4.1. <u>Work Plan</u>. The Contractor shall develop and present a work plan annually for approval by CDE. The Contractor shall adhere to the mutually agreed upon detailed schedule that outlines the tasks and durations for each year of the Contract. The draft schedule is included in Exhibit B. Colorado has determined that this Contract will cover the content areas of Science and Social Studies with the option of later adding the content areas of English Language Arts and Mathematics.

The Contractor and CDE shall collaborate at each major phase in the test development process to produce assessments that meet all test specifications and CDE expectations.

The Contractor shall conduct an internal audit for the CoAlt at least once during the Contract period to ensure that all aspects of their work meet professional standards and industry best practices.

B.4.2. <u>Content</u>.

B.4.2.a. <u>Determining Eligible Content</u>. The Contractor shall provide draft eligible content for the CoAlt. Eligible content shall be established from the Extended Evidence Outcomes (EEOs) of the Colorado Academic Standards. The Contractor shall outline which standards are assessable, prioritize standards, and suggest appropriate item formats for each assessable standard. The Contractor shall provide refined eligible content to be reviewed by the field and revised by CDE. The Contractor shall be responsible for providing a finalized document for CDE approval.

B.4.2.b. <u>Claims and Reporting Categories</u>. The Contractor shall include Colorado stakeholders conversation regarding the claims that CDE expects to be able to make based on its alternate assessments. This can be an abbreviated conversation; with the claims, where possible, parallel to the summative assessment.

Based on these claims, the Contractor and CDE shall collaborate in determination of reporting categories for each assessed subject, and sub-scores shall be considered. The Contractor shall be responsible for providing a finalized document for CDE approval.

B.4.2.c. <u>Frameworks</u>. The Contractor shall provide draft assessment frameworks. The Contractor shall provide refined frameworks to be reviewed by the field and revised by CDE. The Contractor shall be responsible for providing a finalized document for CDE approval.

It is CDE's intent to assess the breadth and depth of the standards each year to the extent possible given the restrictions of a state alternate assessment.

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B.4.2.d. <u>Development of Performance Level Descriptors</u>. The Contractor shall develop draft general and grade level specific Performance Level Descriptors (PLDs) for the CoAlt for review by CDE. General descriptors shall demonstrate a progression of increasing knowledge, skills, and abilities appropriate for differentiation between performance levels. Grade level and content specific PLDs shall expand the general PLDs to identify specific knowledge, skills, and abilities specific to the content standards appropriate for each performance level. The PLDs shall also inform development of item specifications and future item writing and shall be used in the standards setting process to support the validity and defensibility of the entire assessment system. The PLDs shall also inform development of item specifications and future item writing and shall be used in the standards setting process to support the validity and defensibility of the entire assessment system.

The Contractor shall provide refined PLDs according to the following plan:

- Contractor Content Support Services CSS will develop draft PLDs for CDE review
- CDE will review and provide feedback to Contractor CSS
- Elementary and Middle School PLDs:
  o Contractor will hold PLD review meeting during Teacher Item and Bias Review Committee Meetings for Spring 2014 development
  o Contractor will make updates to PLDs following Item and Bias review meeting
  o CDE will post on the web for district review by January, 2014
  o Standard Setting will occur during the summer of 2014 for Elementary and Middle School Science and Social Studies. PLDs will be finalized at Standard Setting.
- High School:
  o Contractor will hold PLD review meeting during Teacher Item and Bias Review Committee Meetings for Fall 2014 development
  o Contractor will make updates to PLDs following Item and Bias review meeting
  o CDE will post on the web for district review by January 2015
  o Standard Setting will occur during the winter of 2015for High School Science and Social Studies. PLDs will be finalized at Standard Setting.
- If CDE should choose to move forward with English Language Arts and Mathematics as part of this contract, a PLD development plan will be mutually agreed upon.

- Five levels of Alternate PLDs will be outlined with the following levels:

Alternate PLDs
Inconclusive
Exploring
Emerging
Developing
Novice

B.4.2.e. <u>Item Types and Test Blueprints/Specifications</u>. The assessment item types to be developed for the CoAlt are defined below:

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- Selected-Response – These are items in which students are presented with several answer choices, one of which is correct. Students are asked to select the correct answer. Selected-response items should be designed to assess the highest level of content knowledge and cognitive complexity that can be appropriately measured through this type of item and is appropriate for the EEO.
- Supported Performance Tasks – These are items in which students manipulate objects, complete a chart/table, or provide a response to a question or a prompt. Supported performance tasks will follow a format of multiple-step selected response items. The items will allow for responses that can be provided in approximately five-ten minutes or less.
- Short Constructed-Response – These are items in which students write in a response to a question or a prompt. Student responses consist of 1) one to five letters, one to five words or one to five sentences, 2) written work in solving a Mathematics problem, 3) drawing, or 4) another response that can be provided in approximately five to ten minutes or less. Should CDE move forward with the development of English Language Arts and Mathematics assessments, short constructed response items will be included.

The Contractor shall create a proposed test blueprint for the CoAlt to be developed in each tested content area by grade level. The Contractor shall provide refined blueprints to be reviewed by the field, as appropriate, and revised by CDE. The Contractor shall be responsible for providing a finalized document for CDE approval. This blueprint shall specify the number of each type of assessment item to be used at each grade level in each content area, depth of knowledge, and the number of items in each eventual test form. (The Contractor shall take into consideration the fact that the alternate assessments must generate valid information throughout the data distribution, including both tails.)

Should CDE move forward with the option of later adding the content area of English Language Arts, the Contractor shall develop ELA assessments that include a combination of literary and informational passages. Literary texts include fiction, literary nonfiction, and poetry. Informational texts include exposition, argumentation, persuasive texts, procedural texts, and documents. Final text distributions shall be approved by CDE.

The Contractor shall develop test specifications in collaboration with CDE. The test specifications shall include, at a minimum, 1) the definition of the content of the assessment; 2) the proposed number of items for the test; 3) the desired psychometric properties of the items and test; 4) the arrangement of items and components of the test; 5) the item type; 6) the evidence outcome; 7) the number of score points per reporting category; 8) item usage (such as field test, operational, and anchor); 9) the approximate time requirements for each assessment; 10) new development to compensate for refresh and release rates on forms; 11) the use of approved testing accommodations; 12) the content domain; and 13) other psychometric information.

B.4.2.f. <u>Design</u>. The Contractor shall develop a draft test design with which to assess the EEOs. The Contractor shall provide a refined design to be reviewed and revised by CDE. The Contractor's draft test design is below.

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Colorado Alternate Assessment		Stand Alone Field Test					Operational Test									Embedded FT								
		Total Items per Form		# Forms	Total Items Field Tested		Operational Items per Form		Linking Items per Form (beginning in 2015)		Possible Points per Item Type		Total Points Possible	% From SR Items	% From SPT Items	SR Items per Form		SPT Items per Form		Total Items per Form		# Forms	Total Items Field Tested per year	
Content	Grade	SR	SPT		SR	SPT	SR	SPT	SR	SPT	4 pt SR	6 pt SPT				OP	FT	OP	FT	SR	SPT		SR	SPT
Science																								
Science	5	12	3	2	24	6	15	2	4-5	1	60	12	72	83%	17%	15	4	2	2	19	4	1	4	2
Science	8	19	3	2	38	6	24	2	6-7	1	96	12	108	89%	11%	24	3	2	1	27	3	2	6	2
Science	12	19	4	2	38	8	23	3	6-7	1	92	18	110	84%	16%	23	3	3	1	26	4	2	6	2
Social Studies																								
Social Studies	4	12	3	2	24	6	15	2	4-5	1	60	12	72	83%	17%	15	4	2	2	19	4	1	4	2
Social Studies	7	12	3	2	24	6	15	2	4-5	1	60	12	72	83%	17%	15	4	2	2	19	4	1	4	2
Social Studies	12	19	4	2	38	8	23	3	6-7	1	92	18	110	84%	16%	23	3	3	1	26	4	2	6	2

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Colorado Alternate Assessment		Standalone Field Test					Operational Test									Embedded FT								
		Total Items per Form		# Forms	Total Items Field Tested		Operational Items per Form		Linking Items per Form (operational)		Possible Points per Item Type		Total Points Possible	% From SR Items	% From SPT Items	SR Items per Form		CR Items per Form		Total Items per Form		# Forms	Total Items Field Tested	
											4 pt SR	6 pt SPT												
Content	Grade	SR	SPT		SR	SPT	SR	SPT	SR	SPT						OP	FT	OP	FT	SR	SPT		SR	SPT
ELA																								
ELA	3	19	3	2	38	6	24	2	6-7	1	96	12	108	89%	11%	24	3	2	1	27	3	2	6	2
ELA	4	19	3	2	38	6	24	2	6-7	1	96	12	108	89%	11%	24	3	2	1	27	3	2	6	2
ELA	5	19	3	2	38	6	24	2	6-7	1	96	12	108	89%	11%	24	3	2	1	27	3	2	6	2
ELA	6	19	3	2	38	6	24	2	6-7	1	96	12	108	89%	11%	24	3	2	1	27	3	2	6	2
ELA	7	19	3	2	38	6	24	2	6-7	1	96	12	108	89%	11%	24	3	2	1	27	3	2	6	2
ELA	8	19	3	2	38	6	24	2	6-7	1	96	12	108	89%	11%	24	3	2	1	27	3	2	6	2
ELA	9	19	4	2	38	8	23	3	6-7	1	92	18	110	84%	16%	23	3	3	1	26	4	2	6	2
ELA	10	19	4	2	38	8	23	3	6-7	1	92	18	110	84%	16%	23	3	3	1	26	4	2	6	2
ELA	11	19	4	2	38	8	23	3	6-7	1	92	18	110	84%	16%	23	3	3	1	26	4	2	6	2
Mathematics																								
Math	3	19	3	2	38	6	24	2	6-7	1	96	12	108	89%	11%	24	3	2	1	27	3	2	6	2
Math	4	19	3	2	38	6	24	2	6-7	1	96	12	108	89%	11%	24	3	2	1	27	3	2	6	2
Math	5	19	3	2	38	6	24	2	6-7	1	96	12	108	89%	11%	24	3	2	1	27	3	2	6	2
Math	6	19	3	2	38	6	24	2	6-7	1	96	12	108	89%	11%	24	3	2	1	27	3	2	6	2
Math	7	19	3	2	38	6	24	2	6-7	1	96	12	108	89%	11%	24	3	2	1	27	3	2	6	2
Math	8	19	3	2	38	6	24	2	6-7	1	96	12	108	89%	11%	24	3	2	1	27	3	2	6	2
Math	9	19	4	2	38	8	23	3	6-7	1	92	18	110	84%	16%	23	3	3	1	26	4	2	6	2
Math	10	19	4	2	38	8	23	3	6-7	1	92	18	110	84%	16%	23	3	3	1	26	4	2	6	2
Math	11	19	4	2	38	8	23	3	6-7	1	92	18	110	84%	16%	23	3	3	1	26	4	2	6	2

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B.4.3. <u>Item Development</u>. The items developed for the CoAlt assessment shall be custom-developed for Colorado. CDE shall own the items within the CoAlt bank. CDE is not seeking to use vendor-owned items.

B.4.3.a. <u>Samples Items</u>. The Contractor is responsible for providing sample items in Colorado SFY 2013 for each grade level and content area being assessed under the Contract. CDE will share the sample items provided by the Contractor with the public, so the items must be available for this purpose.

B.4.3.b. <u>Item Specifications and Style Guides</u>. The Contractor shall develop specifications for each type of item and artwork to be created for the CoAlt. The Contractor shall work with CDE to prepare a Colorado Style Guide that will be followed by the Contractor. On an annual basis, the Contractor shall work with CDE to review and revise the item and art specifications and the style guide to verify that they contain newly-introduced features or needed clarifications. The Contractor shall be responsible for providing updated copies of item and art specifications and style guides to CDE for approval.

B.4.3.c. <u>Universal Design</u>. The Contractor shall ensure that items will be created that will permit students with disabilities and English language learners (ELLs) to fully participate in the assessments and receive valid scores, while minimizing the need for accommodations.

The Contractor shall, at a minimum, incorporate the following steps:

- Examine items for evidence of disability bias and avoid such items;
- Use everyday words to convey meaning when vocabulary is not part of the tested construct;
- Establish text that is straight forward and concise;
- Reduce excessive text length and irrelevant material;
- Avoid complex sentence structure;
- Use clear, unambiguous words
- Minimize the use of italic typeface
- Use highly distinguishable symbols on graphics
- Provide art and illustrations that have clearly distinguishable features;
- Avoid using text on shaded backgrounds; and
- Use page-layout designs that are easy to read and follow.

B.4.3.d. <u>Number of Items to be Developed</u>. For each year, grade, content area and item type in the CoAlt, the Contractor will identify the number of items that will be developed to be taken to item review, the number expected to be accepted, the number expected to be included across the test forms during field testing and the number expected to be accepted at data review. The Contractor is required to provide enough items that pass data review to meet refresh and release requirements for each item type.

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	Grade	Total Requirement				Total Development				Percent Overage vs. Required number of items		
CoAlt Science and Social Studies Item Development Plan												
		SR	SPT	Total		SR	SPT	Total		SR	SPT	Total
SCIENCE	5	41	10	50		52	14	66		130%	140%	**132%**
	8	63	10	72		81	14	95		131%	140%	**132%**
	12	62	17	79		81	22	103		131%	129%	**130%**
		164	**37**	**201**		**214**	**50**	**264**		**130%**	**135%**	**131%**
SOCIAL STUDIES	4	41	10	50		52	14	66		130%	140%	**132%**
	7	41	10	50		52	14	66		130%	140%	**132%**
	12	62	17	79		81	22	103		131%	129%	**130%**
		142	**37**	**179**		**185**	**50**	**235**		**130%**	**135%**	**131%**

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CoAlt Optional English Language Arts and Math Item Development Plan											
		Total Requirement				**Total Development**				**Percent Overage vs. Required number of items**	
	Grade	SR	SPT	Total		SR	SPT	Total		SR	SPT	Total
READING/WRITING	3	56	9	64		72	13	85		129%	144%	131%
	4	56	9	64		72	13	85		129%	144%	131%
	5	56	9	64		72	13	85		129%	144%	131%
	6	56	9	64		72	13	85		129%	144%	131%
	7	56	9	64		72	13	85		129%	144%	131%
	8	56	9	64		72	13	85		129%	144%	131%
	9	55	15	70		72	19	91		131%	127%	130%
	10	55	15	70		72	19	91		131%	127%	130%
(Optional)	12	55	15	70		72	19	91		131%	127%	130%
		495	**99**	**594**		**648**	**135**	**783**		**129%**	**136%**	**131%**
MATH	3	56	9	64		72	13	85		129%	144%	131%
	4	56	9	64		72	13	85		129%	144%	131%
	5	56	9	64		72	13	85		129%	144%	131%
	6	56	9	64		72	13	85		129%	144%	131%
	7	56	9	64		72	13	85		129%	144%	131%
	8	56	9	64		72	13	85		129%	144%	131%
	9	55	15	70		72	19	91		131%	127%	130%
	10	55	15	70		72	19	91		131%	127%	130%
(Optional)	12	55	15	70		72	19	91		131%	127%	130%
		495	**99**	**594**		**648**	**135**	**783**		**129%**	**136%**	**131%**
TOTAL		**1296**	**272**	**1568**		**1695**	**370**	**2065**		**131%**	**136%**	**132%**

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B.4.4. <u>Electronic Item Development System and Item Bank</u>.

B.4.4.a. <u>Item Development System</u>. Item development for the CoAlt shall be carried out using the Contractor's secure encrypted electronic item development system.

B.4.4.b. <u>Item Bank</u>. Assessment items shall be stored and retrieved from the Contractor's secure item bank.

Individual items shall have a unique identifier assigned. The Contractor's item banking system, Item Tracker Test Builder (ITTB) shall store item alignments, answer keys/scoring rubrics, meta-data (grade, content, standard, difficulty), item text, item graphics, item type and data elements including position on form, administration date(s), classical statistics, IRT statistics and DIF statistics. The Contractor's item bank shall indicate the status of each item (e.g., not yet reviewed, content and sensitivity/bias reviewed, field tested, data reviewed, when used operationally along with standards, assessment objectives and item statistics), and permit the CoAlt forms to be readily assembled. The Contractor shall provide CDE with access to the item bank.

B.4.5. <u>Development Process and Cycle</u>.

B.4.5.a. <u>Passage Selection</u>. The Contractor shall select appropriate passages for all relevant content areas in the CoAlt based on complexity, quality, and range. The Contractor shall provide all needed passages for CoAlt. Passages for the CoAlt are expected to be 3-5 sentences. The Contractor will commission these "passages" or develop them internally.

The Contractor shall work with CDE staff to develop and refine guidelines for appropriate context content. CSS will create passage/stimuli specifications document for review and approval by CDE.

B.4.5.b. <u>Passage Review</u>. Should Colorado move forward with the option of later adding the content area of English Language Arts, the Contractor shall recruit five (5) diverse educators per grade span; both general education and special education teachers, to share their insights and observations about proposed assessment passages. The Contractor will present passages at the first Item Writer Training session of the cycle. Teachers will select passages for development and work on writing items for the remainder of the two-day meeting.

The Contractor shall prepare review material in close to final format, including art work, illustrations, photos, and graphics. The Contractor shall provide meeting facilitators

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who will record committee comments, committee recommendations, and committee judgments. Following the review meeting, the Contractor shall share results with CDE. The Contractor shall implement all edits with authorizations of CDE. The Contractor shall be responsible for providing finalized copies of passages to CDE for approval. Passages for the CoAlt will be presented with associated item(s). CDE will review as part of the item development process and receive final copy prior to the content/bias review meeting.

B.4.5.c. <u>Item Development Meetings (Educator Meeting)</u>. The Contractor shall recruit, evaluate, and retain educators to serve in the role of item writers. To the maximum extent possible, selected-response, supported performance tasks and short constructed-response items for the CoAlt shall be created by Colorado teachers (special educators who work with students with significant cognitive impairments, content area specialists and general education classroom teachers). For each content area and grade span (elementary, middle and high school), in year 1, a minimum of one (1) teacher experienced in educating special needs students and one (1) content specialists for science and social studies shall participate. For each content area and grade span (elementary, middle and high school), in year 2, a minimum of two (2) teacher experienced in educating special needs students and two (2) content specialists for science and social studies shall participate. For each content area, one of the educators must also have English learner expertise. The Contractor shall provide considerable training and guidance to these educators. In addition to the other expenses related to all educator meetings, the Contractor shall be responsible for providing each educator with a stipend of a minimum of $30 per accepted and usable item written. The Contractor will track items written by Colorado teachers throughout the development process. Payment will be provided to teachers for items noted as "accepted" or "accepted with minor revisions" at Item and Bias Review meetings.

Item writing workshops shall be in person and held in the Denver area. The Contractor shall be responsible for all meeting arrangements and payments, including meeting space; audio visual equipment, including laptops for use by the item writers as appropriate; multiple Internet connections for use by the item writers; meals, lodging and travel.

Workshops shall include an introductory presentation and training, material, opportunities to write items, and immediate and ongoing feedback to workshop participants. The Contractor's assessment specialists shall facilitate small groups with collaboration among participants while implementing the writing process.

The Contractor shall create item writing training materials to be used for review by CDE at least two weeks prior to the item writing workshop. The training shall assist item developers in understanding Universal Design principles, so that the need for extensive assessment accommodations for students with disabilities and English language learners is minimized. The CoAlt development training materials shall include items such as (1) A general PowerPoint presentation addressing the fundamentals of item writing common to all content areas; (2) Content specific PowerPoint presentations addressing issues particular to those content areas; (3) The Colorado Academic standards with extended evidence outcomes; (4) item development plans for each assessed grade in each content area; (5) *Children Writer Word Book*; (6) Everyday language; and (7) Templates. In addition, the language load of assessment materials must be carefully considered for all students for the academic assessments in Mathematics, Science, and Social Studies. CDE shall review and approve these materials and procedures before these materials are used.

The Contractor shall inventory the items developed by Colorado educators and shall be responsible to provide enough items for the CoAlt should the educators be unable to produce enough items in the available time. The Contractor must plan on being responsible for the majority of the item writing work, particularly in the initial Contract year as the field becomes accustomed to the new EEOs.

B.4.5.d. <u>Item Revision and Supplementation.</u>

Once items are accepted from a developer, the Contractor shall further review and revise the items, as needed, to meet CDE's expectations. The Contractor's process for review includes three internal content reviews, an internal editorial review, and an internal bias and sensitivity review. Throughout this multi-step item review process, the Contractor's assessment specialists shall continuously evaluate the match of the items to the standards, the appropriateness of the items to the population being assessed, the importance of the information being assessed,

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the implications for instruction, review and edit each item for technical quality, as well as conformity with Colorado Test Item Specifications and the Colorado Style Guide. If an item is unrelated to the content standards, is developmentally inappropriate, measures trivial information, or provides inappropriate models for instruction, the Contractor shall revise or eliminate it.

The Contractor shall have three levels of internal reviews of items: assessment specialist review, content area specialist review, senior-level content staff review. The Contractor shall use the following guidelines for these reviews:

- Match of each item to the identified standard, grade level equivalent and EEO
- Match of each item to the principles of high- quality item development
- Accuracy of the content of the item
- Difficulty of the item
- Adherence to the principles of universal design
- Relevance of each item as the item relates to the purpose of the test
- Readability of the item
- Appropriateness of any artwork, graphs, figures, etc.

During the first year of development, Colorado educators shall develop approximately 25 percent of the items and the Contractor shall use trained outside item writers to develop the remaining 75 percent of the items. Should Colorado educators be unable to develop this percentage of usable items, the Contractor shall assume responsibility for remaining item development. The Contractor's item writers shall have demonstrated expertise in item writing in the contracted content areas and grade spans. The Contractor shall train these item writers on the specific Colorado Assessment Standards, including the EEOs; Colorado item styles; and general item specifications. In the second year of development, the development responsibilities shall shift toward Colorado teachers developing approximately 90 percent of the items and outside item writers developing the remaining 10 percent of the items.

Ultimately, the Contractor is responsible for the development of the needed number of items for each content area and grade level so that post item review, field testing and data review, there are sufficient items to build each year's operational assessment.

B.4.5.e. <u>Content and Bias/Sensitivity Review (Educator Meeting).</u>
All alternate assessment items are to be reviewed upon the
completion of item editing. The Contractor shall provide
internal content review to ensure that all CoAlt items align
to the identified standard; adhere to the principles of
Universal Design; ensure the accuracy of the content;
ensure appropriate difficulty of the item for the target
population; readability of the item; relevance to the
purpose of the assessment; match the principles of high-
quality item development; and, appropriateness of artwork,
graphs, figures, etc.

After the Contractor's internal review, each item shall
undergo a CDE review followed by field review of the
items and associated scoring rubrics. Each item shall be
reviewed by a Content and Bias/Sensitivity Review
Committee in each content area to assure that the item is of
high quality, that it is aligned with a skill in the EEOs for
that content area, that it measures the skill in a sound
manner, that the item does not unfairly
advantage/disadvantage any student, and that it is not
offensive to students, parents, or the public. This
committee shall also review the overall content coverage of
the set of items, noting any areas where the alignment of
the set of assessment items is weak. Each committee shall
review each batch of items prior to stand-alone field testing
as well as prior to embedded field testing of the items.

Content and bias/sensitivity review meetings shall be
conducted in two (2) days. For each content area and grade
span (elementary, middle and high school), a minimum of
two (2) teachers experienced in educating special needs
students and three (3) content specialists for each subject
area shall participate. Based on scheduling, teachers
experienced in educating special needs students can likely
participate in multiple categories; however, content
specialists will only be able to participate in one category.
During the initial development, it is expected that these
meetings may take an additional day. These meetings shall
occur in person at meetings held in Denver, CO. The
Contractor shall be responsible for providing CDE with the
number of items accepted as is, the number of items
accepted with major revisions, accepted with minor
revisions and the number of items rejected.

The Contractor shall take the lead role in training the
educators and facilitating each one of the Item Review
Committees IRCs. The Contractor shall prepare all

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materials for these meetings. Items shall be in as close to final formatting as possible, including passages, artwork, illustrations, photos, and graphics. The Contractor shall also provide any needed ancillary materials in hard copy. All materials and the meeting agenda shall be reviewed by CDE at least one week prior to the meeting to allow time for revisions to be made prior to printing.

Content and Bias/Sensitivity Review meetings shall be conducted annually for all newly-developed Colorado items. The Contractor's facilitator shall record all committee input in master item books, with a location to mark the committee's judgment. At the conclusion of each meeting, the Contractor shall compile and share results from the meetings with CDE. The issues noted by each review committee shall be corrected by the Contractor or the item(s) should be deleted from the pool of items.

The Contractor shall be responsible for all costs associated with this educator meeting.

B.4.5.f. <u>Field Testing (Initial and Embedded)</u>. All newly created items for the CoAlt shall be formally field tested.

For the first year of the Contract, field testing shall be conducted as a stand-alone activity. The Contractor's assessment specialists shall assemble field test sets of items so that they comprise the appropriate distribution of standards, item types, topic coverage, and item difficulty. Selected items will come from approved new development. Proposed field-test items will be presented to CDE for approval in item card format for ease of item selection. Field-test items must be carefully assessed to avoid clueing. After approval by CDE, the Contractor shall assemble field-test items into standalone field test forms. The Contractor shall indicate the number of forms needed in Science and Social Studies. Field test item counts, field test administration years, and forms for each administration are outlined in the Test Designs documents found in B.4.2.f.

In subsequent years, field testing shall be embedded. The Contractor's assessment specialists will assemble field test sets of items so that they comprise the appropriate distribution of standards, item types, topic coverage, item difficulty, and cognitive levels. Selected items will usually come from approved new development, but may be selected from the item bank if it contains items that still

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require field testing or re-field testing. Proposed field-test items will be presented to CDE for approval in item card format for ease of item selection. Field-test items must be carefully assessed in relation to the operational form to avoid clueing between field-test and operational items. After approval by CDE, the Contractor will embed field-test items into approved field-test item positions of the operational form in composed test. While there will be only one Core operational form, the use of embedded field testing may result in multiple forms used during each administration, differing only in the field test items of each. After approval by CDE, the Contractor shall embed field-test items into approved field-test item positions of the operational form in composed test forms. Two embedded field test forms may be administered per subject and grade for CoAlt Field Test administrations. Test Design requirements are outlined in B.4.2.f.

B.4.5.g. <u>Data Review (Educator Meeting)</u>. After the completion of field testing, the Contractor's assessment specialists shall work closely with the Contractor's psychometricians and with CDE staff to analyze the statistics associated with the items. After a thorough internal data review, a Data Review Committee consisting of educators from across Colorado shall review flagged field tested items. During these meetings, educators shall recommend which flagged items should not be used; which should be revised and re-field tested; and which should be used operationally, including justification for their use despite the flags.

These meetings shall take no more than one day for all content areas and will be held via WebEx. These reviews may be held in conjunction with the IRC meetings; however, educators should not be asked to be out of their classrooms for more than two days in a row. The Contractor shall describe how it will protect the confidentiality of the items before, during, and after the review meetings.

The Contractor shall take the lead role in training the educators and facilitating each one of the data review teams. All materials must be reviewed by CDE at least one week prior to the meeting to allow time for revisions to be made prior to printing.

The Contractor shall be responsible for all costs associated with educator meetings. The Contractor's plan of action and timeline describe how and when each of the training

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and support tasks will be accomplished. See Section B.9.1 for additional information.

B.4.6. <u>Form Development</u>. Once items have been accepted or rejected based on recommendations of the data review committees, the Contractor's assessment specialists and the Contractor's psychometricians shall select a meaningful set of operational and anchor items in accordance with the test blueprints and test construction specifications. Items selected for use operationally and as anchors will address a range and variety of skills with a variety of topics and contexts. The plan for the development of the forms must include consideration of the number of anchor items needed to equate the measures from year to year, the number of new operational items to be included, and the number and position of new items to be field tested. Maximum number of exposures for items must also be addressed. This plan will be formalized in the "Test Construction Specifications" document for review and approval by the CDE. Operational forms shall be approved by CDE prior to final production and use.

B.4.7. <u>Accommodated Materials and Administration Procedures</u>.

B.4.7.a. <u>Accommodated Procedures</u>. It is expected that within the standardized test administration procedures there will be adequate flexibility in presentation mode and response mode to allow students with a variety of communication, sensory and physical disabilities access the test. For use with the CoAlt, the Contractor shall provide a list of appropriate assessment accommodations for English learners. Accommodations listed must be supported by the most current research for this population. The list must describe the test accommodations and supports that allow access for students with disabilities to most fully participate in each assessment without interfering with the measurement of the constructs. The Contractor shall also discuss with CDE any accommodations which would threaten the validity of the alternate assessment by interfering with the constructs being measured.

B.4.7.b. <u>Certification for District Translators</u>. The Contractor shall institute a process for providing certification of district translators to ensure that valid translations are made. The Contractor shall develop a certification form and place that certification form online for district download and use. Local Educational Agencies will complete and maintain the forms.

In the event that the Contractor receives any inquiries or questions regarding such translations, the Program Team for the CoAlt, will notify CDE. She will indicate the source of the inquiry, the district referenced, and the nature of the inquiry (if such information is available). CDE will then be able to follow up with the district and determine any subsequent inquiry or actions.

B.4.8.   Document Development.

B.4.8.a.   District and School Assessment Coordinators Manual. The Contractor shall develop, and distribute the District and School Coordinators Manual for the CoAlt. The District and School Alternate Assessment Coordinators' Manual will provide an overview of the alternate assessment program, responsibilities of the DAC, responsibilities of the School Assessment Coordinator (SAC), directions on how to prepare for the alternate assessment, how to maintain materials securely, how to distribute and collect materials, how to receive and return materials, etc. The Contractor shall develop these manuals in collaboration with CDE, and they will be available via hard copy and online PDFs that allow text searching.

B.4.8.b.   Examiners Manuals and Text. To help prepare school test administrators, the Contractor shall produce an Examiners Manual. The text from the manual will also be inserted in test books for each grade level of the assessment. The Contractor shall produce this manual according to CDE specifications. The Contractor and CDE shall collaborate to develop the Examiners Manual. These manuals shall be available in traditional hard copy at District Assessment Coordinator meetings and within the CoAlt test booklets. The Examiners Manuals will be available online via PearsonAccess™ and the CDE website as PDFs. The Examiners Manuals shall include changes to the CoAlt from the previous year, annual timeline of activities, security procedures, and specific assessment procedures. Instructions for the online system test examiners will use to upload scores will be provided in an electronic PearsonAccess™ User's guide.

B.4.8.c.   Certification Forms. The Contractor shall outline the steps it will take to develop DAC, SAC and Examiner certification forms indicating that ethical standards, security procedures and standard assessment administration procedures were followed throughout the assessment process. Forms shall also include space to indicate

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deviations from any of those. The Contractor shall provide an efficient means to collect, document and store these certifications.

B.4.8.d. <u>Test Booklets</u>. The Contractor shall create the test booklets, which will include examiner directions, teacher-facing pages, student-facing test question or items pages for the CoAlt administrations. Test examiners will enter accommodations codes, test invalidation code, state use only, and district use only information directly within PearsonAccess™. Test materials shall include a score sheet upon which the test Examiners may record student scores and responses. Test examiners shall input the scores and relevant information into the online scoring submission tool from the individual student score sheet.

The teacher-facing pages will include teacher instructions, rubrics, and scripts. All components of the student-facing pages shall be produced in 18-point typeface. The books shall be bound so that both the student and the administrator have visual access to the information pertinent to the specific item. The student-facing pages will include items presented in portrait orientation, with one item per page. Electronic copies of Form 1 of the student items will be distributed to CDE-approved sites to meet Braille and accommodations requirements.

The Contractor shall create a proof of each test item after it has been typeset, formatted, and linked with any artwork. This proof shall have one item per page in a PDF format. CDE shall review the page proof and make any necessary edits or comments. The Contractor's content and editorial staff shall apply the requested changes and send them to the designers, who shall implement the changes. This review and proofing cycle shall repeat until the document receives a clean designation and is approved by CDE. After the forms are approved, they will move to the digital proof stage. The Contractor's team for the CoAlt shall verify that the content and the format of the digital proofs match CDE approved version. When the digital proof is approved by CDE, the Contractor shall print the document. Finally, the Contractor's editors will collect print samples and compare them with the CDE page proof to verify quality control procedures and confirm that any requested revisions were made.

B.4.8.e. <u>Ancillary Materials</u>. The Contractor shall be responsible for procurement and distribution of all Supported

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Performance Task (SPT) cardstock manipulatives and student answer choices cardstock manipulatives needed for the CoAlt, not found in a typical classroom. Upon completion of the assessment administration, the manipulatives will be inserted in to a security bar-coded envelope and returned to the Contractor with secure CoAlt materials.

Secure CoAlt materials will be wrapped in single packs with the following:

- Secure bar-coded test booklets
- Supported Performance Task cardstock manipulatives
- Secure bar-coded envelope for manipulatives

B.4.8.f. <u>Sample/Released Items</u>. Annually, the Contractor's content specialists shall recommend items of each item type in each content area and grade that will be provided to the public as representative of the assessments' cognitive complexity and content coverage. CDE staff will review the recommendations and make final decisions about which items are to be released on the CDE website. The Contractor shall collaborate with CDE to prepare answer key documents and scoring guides that will provide teachers with the correct answers, scoring rubrics, standards assessed, and item statistics. The items shall be presented in such a way that they will be easily downloadable for use in the classroom.

B.5. Assessment Administration

B.5.1. <u>Work Plan</u>. The Contractor shall adhere to the mutually agreed upon detailed schedule that outlines the tasks and durations for each year of the Contract. The draft schedule is included in Exhibit B.

In each year of the Contract, student, school, and district data shall be loaded into the PearsonAccess™ system. Test materials shall be shipped to arrive in districts two weeks before administration. Teachers shall be able to operationally assess their students and enter their observations within PearsonAccess™. Monitors shall observe and provide check scores for a sample of the administration. At the end of the administration window the Contractor shall provide transportation for the assessment materials to be processed.

B.5.2 <u>Test Window</u>. The CoAlt assessment window shall be according to the following schedules for 2013 and 2014.

2013 Assessment Administration	Start Date	End Date
Elementary and Middle School Science and Social Studies Field Test Administration	4/22/2013	5/3/2013
High School Science and Social Studies Field Test Administration	10/21/13	11/22/13

2014 Assessment	Start Date	End date
ELA and Mathematics Field Test (subject to inclusion of ELA and Mathematics to the Contract)	3/31/2014 (tentative)	4/11/2014 (tentative)
Science and Social Studies Operational Administration	4/14/2014 (tentative)	5/2/2014 (tentative)

The specific test windows for 2014, 2015, 2016, and 2017 shall be determined with input from CDE. Testing shall be completed no later than the second Friday in May.

B.5.3. Materials Ordering.

B.5.3.a. Pre-ID/Registration File. The Contractor shall provide a single data source for uploading and managing student Pre-ID information for the CoAlt. The Contractor shall work with CDE to transfer the layout of the current student Pre-ID file so that the existing group and test assignment structure is maintained for users already familiar with the Colorado's established procedures.

B.5.3.b. Materials Ordering System. The Contractor shall use PearsonAccess™ as an online electronic ordering system for DACs to use for the CoAlt. The system shall pre-populate using the Pre-ID/Registration file provided by CDE and/or via PearsonAccess™ Student Data Upload (SDU) file processes. The system will allow DACs to adjust their total student numbers and materials orders.

The Contractor shall confirm district/school orders for materials using a web-based verification system. The Contractor shall ensure that each district's order size is reasonable when it is submitted. The Contractor shall contact any districts requesting an unusual order before materials are shipped.

B.5.3.c. Online Roster. The Pre-ID/Registration file and/or the SDU file will also be used to generate the initial roster for the inclusion in the online score submission system. The

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Contractor's system, PearsonAccess™, shall allow for roster creation, district verification, and roster additions and deletions.

B.5.3.d. <u>Additional Materials Ordering</u>. Last minute shortages of assessment materials shall be handled quickly and efficiently by the Contractor as specified in procedures mutually agreed upon by the Contractor and CDE. The Contractor's system, PearsonAccess™, shall allow DACs to order extra testing materials for the CoAlt, even after the final enrollment numbers have been entered. This system shall allow DACs to check the status of their orders at every step in the process.

In addition, the Contractor shall be responsible for providing a list of which districts submitted additional orders, what they ordered, and whether they had participated in the original materials ordering window(s).

B.5.4. <u>Document Production</u>. An initial materials list is provided in Exhibit D. Upon mutual agreement, specifications may be modified to meet the requirements of the deliverables without cost impact. Additional deliverables will require an amendment and have potential cost impacts.

B.5.4.a. <u>Examiners Manuals and Text</u>. To help prepare school test administrators, the Contractor shall produce an Examiners Manuals and text for each grade level of the assessment. See B.4.8.b. Once the Contractor has developed the manuals and CDE has approved them, the documents shall be released for posting and printing in the CoAlt Test Book. The Contractor shall provide copies of this manual at the test administration workshops held approximately one month prior to test administration.

B.5.4.b. <u>Combined Teacher Instructions/Student Test Booklets</u>. The Contractor shall produce test booklets that contain the Test Examiner requirements, teacher instructions, removable score sheets, and test items for each content area and grade level. See 4.8.d. Braille and enlarged print student materials will be produced by local districts and shall not be the responsibility of the Contractor. The Contractor shall provide the student facing pages in electronic format for districts to produce these adapted materials.

B.5.4.c. <u>Ancillary Materials</u>. The Contractor shall be responsible for procurement and distribution of all ancillaries or

manipulative materials needed for the CoAlt, not found in a typical classroom. See 4.8.e.

B.5.5. <u>Secure Distribution, Collection, Storage and Destruction</u>.

B.5.5.a. <u>Packaging</u>. Materials will be packaged according to district and school and sent to the DACs. The Contractor shall provide pallet maps to indicate where DACs may find the materials ordered. The Contractor shall use its security protocols during pre-packaging and assembly. The Contractor shall ensure accuracy of all orders and will meet schedules with on-time shipping. The Contractor shall track all CoAlt materials as they progress through the packaging system and through final shipment to districts. The Contractor shall use its software and barcode-scanning process controls to assist with quick and secure receipt of CoAlt testing materials and accurate distribution to individual districts and schools in Colorado.

B.5.5.b. <u>Distribution and Collection</u>. The Contractor shall be responsible for the distribution and collection of testing materials for the CoAlt, including outgoing and incoming assessment materials, as well as hard copies of reports. Secure bonded freight carriers and/or courier services will be used for distribution and collection. Delivery and collection activities must conform to a rigid date/time schedule set by CDE.

When shipping the district's test materials requires more than one box, the Contractor shall indicate the actual number of boxes that have been sent (e.g., Box 1 of 10, etc.). The Contractor shall use a brightly colored label on the outside of each box for operational administrations. This label shall include the wording "ATTENTION: District Assessment Coordinator" (or other district personnel as stipulated by CDE) to indicate that the enclosed materials should be brought to the immediate attention of the appropriate district personnel. The size of the label must be appropriately large.

Because shipments will contain secure and individually identifiable materials, all materials shall be shipped with signature required for delivery. Verification of receipt of 100% of the shipments is required.

Once the Contractor has assembled CoAlt materials, the Contractor shall box, label, number, seal, and process them for shipping. The Contractor shall be responsible for

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complete shipment accountability from origin to destination to return. The Contractor has indicated that they will use UPS as their primary shipper.

To help Colorado district representatives easily check shipments for accuracy when they arrive, the Contractor shall include the following easy-to-read shipping reports:

Packing Lists and Pallet Detail Reports provide accurate information about the quantities of materials boxed and to what locations they were shipped

A Security Report lists each individual barcode number assigned to each site.

Colorado district representatives should complete the following steps after CoAlt materials arrive:

1. Verify the shipment
2. Confirm the inclusion of all secure materials
3. Check that barcode ranges correspond to the Security Report
4. Complete the report, contact Contractor to note any discrepancies,
5. CDE shall provide shipping and contact information for each DAC.

B.5.5.c. <u>Materials Storage and Destruction</u>. The Contractor shall archive or retain non-scorable material for 6 months (180 days) after reporting. Upon expiration of the aforementioned time periods, the Contractor must request CDE permission to destroy the stored material before doing so. Electronic files shall be retained for the life of the Contract plus 12 months.

B.5.5.d. <u>Disaster Recovery</u>. The Contractor shall follow an industry-standard recovery approach that meets applicable CDE standards with a reasonable expectation that testing requirements can be successfully achieved. Contractor's approach to Disaster Recovery was included in the proposal.

B.5.5.e. <u>Verification</u>. Within five days of the date(s) that the Contractor is to receive returned materials from the spring assessment(s), the Contractor shall provide a written report to CDE of all districts that have not returned their materials (box level). Semi-weekly (twice per week) reports shall be provided with the addition of partial shipments and test booklet count discrepancies until all secure materials have been accounted for. Resolutions shall also be indicated.

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The Contractor shall be responsible for contacting districts to resolve these issues. A final security report recording that <u>all</u> secure materials have been accounted for shall be provided to CDE within one week of all materials being accounted for.

B.5.6. <u>Test Monitoring</u>.

B.5.6.a. <u>Fidelity to Test Administration and Security Procedures</u>. The Contractor shall provide Test Examiners with procedures for monitoring the secure administration of the test. Workshops and training shall include reinforcement of all security measures and why those measures are of value. The Contractor shall also include security certification forms for all district and school personnel who will be directly involved in handling test materials and/or administering the tests. Section B.8.7 provides details for conducting data forensics analyses for CDE.

The Contractor shall develop monitor checklists with CDE's review and approval. The monitors shall work closely with the Contractor's management team, noting testing processes and any irregularities, and providing results to develop reports that will be provided to CDE within the specified testing period. The Contractor shall assume all responsibility for costs for the monitors and preparation of the reports. Audit reports for each school shall be developed and should include the audit scope (numbers of test sessions/administrators observed, etc.). Audit results may include, but are not limited to, positive practices, nonconformities, and any areas for concern. In the event that a monitor reports a concern that could be interpreted as a breach of security, the Contractor shall immediately notify CDE and provide the monitor's report. Monitors shall not interrupt or interfere with the administration; they will simply notify the Contractor of what they have observed that may be questionable. CDE shall conduct any follow-up investigation and determine any course of action.

In addition, the Contractor shall compile issues and questions brought to the attention of the Contractor by CDE, DACs, and others. This compilation should inform discussions regarding which procedures may need to be clarified or enhanced in future years.

The Contractor shall provide assistance and support to CDE in strengthening Colorado's overall security

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procedures. This may include confirming that state-of-the-art processes, policies, and materials are being employed for the new state assessments.

B.5.6.b. Reported Violations of Administration and Security Procedures. In Colorado, DACs are expected to report violations of administration and security procedures to CDE. Should a DAC contact the Contractor, the Contractor shall redirect the DAC to CDE and verify with CDE that the issue was appropriately reported.

B.6. Scoring.

B.6.1. Work Plan. The Contractor shall provide a plan for the scoring of the tests. This plan must describe each step in the scoring process and must be reflective of a mutually agreed-upon schedule for all scoring activities from start to finish for each assessment year. The work plan shall include annual training dates for Scoring Monitors before the testing window, and Understanding Assessment Results in late summer.

B.6.2. Scoring Guidance. The Contractor shall develop and maintain scoring guidance to maximize reliable scoring on the part of the Test Examiners. CDE will review and approve any changes to the scoring guidance, including scoring rubrics and/or the scoring rules contained in it before they are utilized in the scoring of alternate assessment operational assessments. The scoring guidance developed and used for scoring of released items will be made available to classroom teachers each September for teacher use in "scoring" the work of their students.

B.6.3. Scoring Processes.

B.6.3.a. Resolution of Student, School and District Data During Scoring. The Contractor shall collaborate with CDE to resolve discrepancies among student, school, and district data. Colorado has a unique student identifier system in place that will be used for resolution of student data.

The Contractor's online portal shall enable district personnel to make and verify student demographic record corrections in real time, and to receive alerts about questionable information. The portal shall also alert users to possible key entry or transcriptions errors when they occur. Colorado will be able to provide final sign-off of the student demographic information prior to Contractor proceeding with reporting.

B.6.3.b. <u>Teacher Scoring.</u> The Contractor shall collaborate with CDE staff and Colorado educators to develop a robust scoring system for the CoAlt. The scoring system shall provide the flexibility necessary for assessing students with significant cognitive disabilities, while providing sufficient structure to establish reliable test scores. The Contractor's alternate assessment specialists, psychometricians shall participate in the development of the scoring system as appropriate.

The testing protocols shall be developed for standardization of teacher scoring. Mandatory teacher training sessions shall be conducted via WebEx with a Contractor's facilitator. Training materials shall be developed by the Contractor, with review and feedback from CDE staff until the documents are approved for publishing. The teacher scoring training documents include: the examiner's eligibility requirements, all necessary instructions for preparation for the assessments, all directions for administration of the CoAlt, and complete instructions for scoring. Trainings shall allocate time for addressing questions and concerns from teachers and district personnel.

B.6.3.c. <u>Scoring Monitors</u>. For operational administrations of the CoAlt, the Contractor shall recruit, train, and assign eight (8) scoring monitors to provide secondary scoring throughout the State. All scoring monitors shall have sufficient knowledge of the alternate assessment content, administration, and student population to serve as validation experts and meet all of the pre-determined criteria that define them as experts in the evaluation of the alternate assessment testing population. The criteria used for selecting the scoring monitors shall be that they: (1) have more than 5 years of experience as a certified teacher; (2) are familiar with the alternate assessment population, (3) are subject matter experts regarding alternate assessment test designs and alternate assessment rubrics, and (4) represent different regional locations to get an adequate distribution across the State. The sampling plan shall provide an adequate number of expert scores from a representative sample of the alternately assessed students to be able to generalize results to the larger alternately assessed population.

The Contractor shall provide a training program for the scoring monitors to prepare them to be consistent in their approach and scoring for the expert-scoring task. In

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preparation for the training, scoring monitors will be asked to review the alternate assessment manuals, scoring rubrics, score procedures, and alternate assessment sample items. Group training for the eight (8) scoring monitors will be conducted by the Contractor and CDE staff via WebEx, including review and group discussion of the test materials, test administration, and the monitor protocol. In addition, the Contractor shall present videos of students being scored to the group of monitors. The scoring monitors shall provide an expert score for students' performance using the same materials and protocol as the teacher giving the first (primary) score for the student assessment for purposes of establishing reliability of the scoring rubrics. The resulting scores will have no impact on final student scores. Presentations will be posted to PearsonAccess™ following training events. Student videos will only be used during live training events; videos and references to specific students will be extracted from training presentations posted to PearsonAccess™. Expert scores shall be collected annually during the alternate assessment operational test window. The Contractor shall compare the expert scores to the operational test scores for students in the sample to establish inter-rater agreement statistics, preferably by grade and content area. CDE shall be notified of any test examiner who appears to not be conforming to expected scoring protocols and standards.

The Contractor shall be responsible for providing stipends or substitute reimbursement for the monitors, as well as reimbursing for mileage and relevant meals.

B.6.3.d. <u>Online Score Submission System</u>. The Contractor shall provide an online score submission system for use for the CoAlt. The Contractor's web-based scoring tool, PearsonAccess™, shall provide for score collection, status reporting, and assessment tracking/management services. Student demographic data shall be loaded prior to testing, and the scoring tool shall allow student information to be entered up to the time of scoring. The scoring tool shall include fields or drop-down menus to enter additional data related to the testing experience, the student's typical performance, and accommodations. Additionally, the scoring tool will indicate the time the scores were submitted. CDE retains the right to determine if there are times when scores cannot be input for valid scores such as weekends, after 5:00 pm or after the testing window is closed.

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The scoring data, including that entered by scoring monitors, shall be stored in a single repository with student, teacher, and school data.

B.7. Reporting of Data Files and Assessment Results

B.7.1. <u>Work Plan</u>. The Contractor shall adhere to the mutually agreed upon detailed schedule that outlines the tasks and durations for each year of the Contract. The draft schedule is included in Exhibit B.

Colorado shall use the Contractor's tools for collecting CoAlt assessment scoring and reporting specifications. The Contractor shall ask CDE a series of questions to establish a baseline for data requirements and preferences. The process of defining detailed Colorado requirements will clarify information such as that in the following table. This list is not exhaustive.

Reporting Requirements	
Requirement Categories	**Description**
General Expectations	
Report Types	Descriptions, purposes, and narrative explanations
Performance Content	Alignment to state objectives and grade level
Federal Requirements	Demographic summary reporting content
Timelines	Scheduling expectations, including scoring and reporting milestones
Business Rules	
Data groups	Attemptedness, suppression, and exclusion
Formatting	Rules for data fields within each reporting format
Performance levels	Pass/fail designations and Identification of individual student strengths and weaknesses
Data Analyses	
Item Analyses	Summaries of performance data by test item across student reporting groups
Presentation	
Report Appearance	Graphic display standards and alternate media
Report Mockups	CDE review of mockups for all student-results
Production & Distribution	
Report Production	Printing, pagination, sorting, and collation
Report Delivery	Recipients, packaging, and shipping

The Contractor shall work with CDE to confirm its understanding of Colorado expectations. The Contractor shall reference this record of CDE requirements and preferences throughout the activities associated with delivering data analysis and results reporting.

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B.7.2. <u>Data</u>. All raw student data shall be provided to CDE by the Contractor.

B.7.2.a.

<u>Data Integration</u>. The Contractor shall support standards-based integration. The Contractor shall work with CDE to define a final version of the integration prior to implementation. Data from the Contractor shall be exported in one or more of the following data exchange formats:

- Standardized XML (Ed-Fi Interchange Format)
- Comma Separated Values (CSV) Format
- Schools Interoperability Framework (SIF)
- ASCII Text Format

B.7.2.b. <u>Data Files</u>. The deadline for posting the initial individual student level file for the districts is no later than the first Friday in June, after the initial operational administration and standard setting schedule. The exact content, naming conventions, definitions of data elements, and file type shall be clearly documented and agreed upon by the Contractor and CDE at least three (3) months prior to test administration. The timeframes for reporting following the fall High School administration will be no longer than the spring reporting of the Elementary and Middle School administration.

The Contractor shall provide full state data files to CDE. The Contractor shall maintain the proper identification of each student and the accurate matching of the student to the test results using the identification number for each student. The data file shall contain all information gathered on each student during the test administration and scoring period including but not limited to the following:

- School and district name and identification number assigned by CDE designating where the student was tested;
- Individual item scores; and
- All raw and derived data

The state data file shall be transmitted to CDE. The exact content, naming conventions, definitions of data elements, and file type shall be clearly documented and agreed upon by the Contractor and CDE at least three (3) months prior to test administration.

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Before generating final-results data files, the Contractor shall present a detailed business sequence flow for Colorado review and institute intermediate CDE approval milestones throughout the reporting process.

At a minimum, the state file shall include all elements that have been used in reporting. The Contractor shall provide an electronic version of the state file to CDE.

B.7.2.c. Data Documentation. The Contractor shall develop reports that provide information in a form most useful to recipients. The Contractor shall follow these steps:

Step One: Proposal Requirements. The Contractor's writers, designers, and developers have thoroughly examined Colorado reporting requirements. The Contractor's technology and program teams also have met internally to discuss and determine CDE requirements for student and summary reports.

Step Two: Development of Report Mockups. When the Contractor's teams reach consensus and form a clear picture of CoAlt reports, the Contractor's designers shall begin to develop realistic mockups.

Step Three: Customer and Internal Requirements. The Contractor shall discuss CDE's precise reporting requirements for the CoAlt. To save valuable time and effort, the Contractor will assign a requirements analyst for the CoAlt. With Colorado's existing deliverables in hand, the analyst will re-examine the Contractor's recommendations and pre-fill the Contractor's customized documentation developed specifically for Colorado.

Step Four: Score and Report Planning Meetings. Early in the contract cycle, the Contractor shall schedule an initial scoring and reporting meeting. During this face-to-face consultation between the Contractor and CDE, the Contractor shall verify both the prefilled documentation and the report mockups. The Contractor's requirements collecting job will not be completed until the Contractor has satisfied CDE by delineating the specified content, look, and direction for each final CoAlt report.

Step Five: CDE Confirms Requirements. The Contractor's program team, report designers, and technology developers shall continue to work with CDE to baseline this documentation in anticipation of future scoring, data analysis, and reporting activities.

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Step Six: CDE Approval of Mockups. Colorado reports must be well constructed, graphically pleasing, easy to interpret, and accurate. The Contractor shall stay informed about recent reporting advancements, federal regulations, identified user preferences, and trends in effectively reporting student data nationwide, and inform Colorado when adjustments to the reports are warranted.

Step Seven: Reporting Requirements Completed. Colorado requirements documentation and mockups shall be used later during data testing, quality assurance evaluations, and production to validate that deliverables meet CDE educational measurement objectives.

B.7.2.d. <u>Data Ownership</u>. CDE shall own the raw and final data generated through the Contract. The Contractor is not allowed to utilize data generated through the CoAlt for its own purposes. Any usage of the data generated through activities related to this Contract may not be used for purposes outside of this Contract without prior written approval from the data owners.

CDE may choose to report the data in additional reporting layouts. Additionally, electronic images of the state level summary report by grade must be delivered to CDE. These images shall be in a format mutually agreed upon by the Contractor and CDE.

B.7.2.e. <u>Student Biographical Data Review (SBD)</u>. After testing, districts shall be provided with the opportunity to review the demographic data generated from the electronic score submission system. The review process shall occur after all testing has been completed and scores have been submitted, but before all final assessment results are made available.

CDE shall have the option of using the Contractor's online portal, PearsonAccess™, to enable authorized staff to make corrections, verify student biographical data, and receive alerts about questionable information in real time. Should Colorado decide to use the Contractor's online portal, with input from the Educational Data Advisory Committee (EDAC), the Contractor, and Data Pipeline staff members, PearsonAccess™ shall be configured to incorporate a Colorado-supplied set of data edit rules that identify potential errors in online student and test specific data. These data edit rules shall define specific conditions that exist within a student test record, and may include single-

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field edits (e.g., invalid date of birth) and simple cross-field edits. In the event that a student test record contains a condition that does not agree with the defined data edit rules, a data alert message shall be generated and displayed on the PearsonAccess™ screen. Users shall be able to resolve the alert conditions displayed online so the student information is correct prior to final reporting.

By enabling districts to clean up all their data in one location online, the overall process can be more efficient and Colorado can better monitor and manage completion status. After districts complete record corrections, CDE can provide a certification of demographic data, at which point the state and district's data are submitted for reporting.

Should Colorado decide to use its own system for making student biographical data corrections rather than using PearsonAccess™, the Contractor shall support CDE during this process by providing student biographical data files prior to reporting and updating student biographical data files from CDE.

B.7.3. Score Reporting.

B.7.3.a. Quality Control. The Contractor shall ensure that all data operations for the CoAlt are subject to multiple checks for accuracy before they are released.

During scoring and reporting for each test administration, the Contractor shall review and confirm that student results data are consistent with Colorado requirements. This quality assurance step will be conducted by the Contractor's testers; they must be detail-oriented, technically proficient, and follow documented best practices.

To confirm the quality of a data file, the Contractor's testers shall follow a process that includes, but is not limited to, the following:

1. Define all customer requirements and document all quality control procedures specific to the assessment program
2. Create a simulation (test deck) to verify that systems and algorithms are established according to client requirements
3. Check that all expected data fields and computed variables are in the file, populated, and represent valid and reasonable values

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4. Should a value appear to be invalid, resolve or escalate the discrepancy according to resolution rules (These commonly apply to cases of blank fields, missing scores, out- of-range scores, and so on.)
5. Confirm that the number of students scored per test form, the number of schools, and district identifiers are consistent with expectations
6. Check data fields to confirm that content categories and attributes match requirements documentation
7. Confirm that data analyses comply with business decision rules
8. Verify that data analyses results are reasonable, accurate, and complete
9. Check that minimum/maximum score values, standard errors of measurement, performance score ranges, and weighted means of district or state scores match requirements documentation
10. Verify that values for raw scores, scaled scores, and score distributions are within expected ranges
11. Check samples of reports at every organizational and aggregate level

The Contractor shall develop and implement quality control procedures for checking the accuracy of all test information, all student scores and identification, and all summary data. The standard for the error rate of final data reports provided by the Contractor shall be zero (0.0). This excludes erroneous data that may have been provided by the school, district, or state.

The Contractor shall plan and prepare quality assurance (QA) schedules that will allow work to flow in a timely, effective manner while maintaining high quality deliverables. CDE shall review and approve the QA schedules annually.

The Contractor shall create detail logs that trace the application of QA procedures to the state score reports after each administration. The Contractor is responsible for maintaining quality products and services in all aspects of the assessment program component from initial development of training materials to the production of electronic data files and score reports.

B.7.3.b. Formatting of Reports. Assessment results for the CoAlt shall be reported in a "user friendly" format. The reporting system shall be designed to complement instruction and to facilitate the use of assessment results to improve student achievement. Reports shall reflect areas of strength as well as areas that need to be targeted for instruction.

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The Contractor shall utilize feedback from students, parents, administrators, and teachers on report shells and content when designing and creating the reporting system. The design and layout of reports shall be initiated in a timely manner so that CDE has sufficient time to review the reports and to provide feedback to the Contractor.

B.7.3.c. <u>Individual Student Reports</u>. Score reports shall fulfill the Federal reporting requirements of the Elementary and Secondary Education Act. Specifically, the reporting system shall meet the expectations outlined in current Peer Review requirements.

At a minimum, individual score reports shall summarize the student's performance in all content areas on which the student was assessed. This report shall include an overall transformed scale score, performance level, and performance level descriptor. Two (2) paper copies (one for the school's student permanent folder and one for the parent) and an electronic version of individual student score reports shall be prepared that summarize the student's performance. The reports must include an indication of measurement error, such as error band graphics; relevant comparative information such as a bar chart displaying student scale score, school scale score mean, and district scale score mean, and explanatory narrative on all reports where appropriate.

The Contractor shall develop report shells translated into Spanish with explanations.

B.7.3.d. <u>State/District/School Reports</u>. The Contractor shall prepare summary reports at the state, district, and school levels. The same data reported on the individual student report shall be aggregated for state/district/school reports. Additionally, state/district/school reports must provide disaggregated data by student population and trend data. Electronic reports must be generated that summarize the performance of the state/district/school on all components of the assessment taken and on any sub-domain or instructional objective sub-score. Exact content and format for each of the reports and files listed below will be further refined during the project. The Contractor shall be responsible for the following:

- State PDF reports of summary and disaggregated data by grade and content area

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- State file of data used to populate the district summary and disaggregated reports by grade and content area
- State file of data used to populate the school summary and disaggregated reports by grade and content area
- District PDF reports of summary and disaggregated data by grade and content area
- District file of data used to populate the district summary and disaggregated reports by grade and content area
- District PDF reports of school level summary and disaggregated data
- District file of data used to populate the school level summary and disaggregated reports
- District file including PDFs of all individual student level reports
- School PDF reports of summary and disaggregated data by grade and content area
- School file of data used to populate the school summary and disaggregated reports by grade and content area
- School file including PDFs of all individual student level reports
- School file of all individual student level data

Should Colorado decide to use its own system for making student biographical data corrections rather than using PearsonAccess™, the Contractor shall support CDE during this process by providing student biographical data files prior to field review and by accepting corrected student biographical data files from CDE after field review.

B.7.3.e. <u>Report Approval</u>. After CDE has approved the report formats and the type of information that will be included on the reports, the Contractor shall prepare accurate printed examples of the reports using mock data. The Contractor shall submit the report mockups to CDE for approval before proceeding with creation of the final score reports. Additionally, the first district reports processed will be used as a validation trial run for approval.

Prior to the distribution of reports, the Contractor shall provide computer readable student level data files to CDE. Prior to the first transfer, the Contractor and CDE shall mutually agree upon the exact format of the data files. However, the Contractor shall plan for the first transfer to be a direct electronic transfer to an agreed-upon secure server via FTP to be followed with an acceptable computer readable media (DVD preferred). The computer readable data file will include an indicator that specifies whether the

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student's biographical information was obtained from a pre-ID.

B.7.3.f. <u>Reporting Dates</u>. The Contractor and CDE shall arrive at an agreeable timeframe for report delivery, keeping in mind CDE's requirement for having individual student results no later than the first Friday in June, after the initial operational administration and standard setting year. The timeframes for reporting following the fall High School administration will be no longer than the spring reporting of the Elementary and Middle School administration.

B.7.3.g. <u>Report Dissemination</u>. The Contractor shall maintain security of all individual test results. Individual test information shall be made available only to CDE, authorized school district personnel, and other entities identified and authorized by CDE. The Contractor shall provide all of the score reports and files to school districts as early as possible. The two copies of the Student Score Report must be provided in a paper copy so that one copy can be distributed to parents and the other retained in the student's permanent folder. Paper copies of individual student reports shipped to school districts shall be packaged to allow districts to easily separate the reports and to distribute them to individual schools. CDE will provide a list of names, emails, and mailing addresses for each district's assessment coordinator.

Other reports shall be provided in electronic format to districts and schools, such as via a secure web site or by a CD delivered to districts by a secure carrier.

Additionally, Colorado educators and districts will have the ability to quickly view assessment results through PearsonAccess™. The PearsonAccess™ security module shall provide administrative user authentication and authorization services. Colorado shall have control over certain administrative security features. Colorado shall have control over the persons allowed to access the system, what level of the system (state, district, school) each user can access (available levels will be configured to match the naming convention used by Colorado), and which administrative functions (enrollments, student data management, order tracking, viewing reports, etc.) each user is permitted to access based on their role. Available roles and their associated permissions shall be configured according to Colorado requirements.

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Each authorized user of PearsonAccess™ shall be given a unique user name and password, and no secure area within the system can be accessed without proper authorization. Additionally, each user shall be authorized to access only certain data records within the system (as described above with respect to user levels and roles). When accessing the administrative system for the first time, the user must agree to a confidentiality statement (customized by Colorado) and change the randomly generated password. CDE shall be able to modify the permissions assigned to a user role at any time. Changes become effective immediately.

B.7.3.h. <u>Reporting Errors</u>. The Contractor shall immediately notify CDE when an error in reporting has been discovered. The Contractor and CDE shall develop a plan for correcting the error. The Contractor shall also provide a revised timeline for correcting the issues and re-creating affected reports. Should a reporting issue occur, the vice president and program manager shall notify CDE and shall draft a communication for notification for schools and districts.

B.7.3.i. <u>Reprinting</u>. CDE shall not be responsible for the fees associated with the reprinting of score reports if the reprinting is necessitated by the actions of the Contractor. CDE shall also not be responsible for fees associated with the reprinting of scores if the reprinting is requested by a district. If a district requests reprinting that is not necessitated by actions of the Contractor, the district shall be responsible for reprinting costs.

B.7.3.j. <u>Assessment Interpretive Guide</u>. Annually, the Contractor shall develop an Interpretive Guide to assist parents and teachers in interpreting assessment results from the CoAlt. This publication shall contain images of the various reports and an explanation of each type of report. It shall also include information about the tested content areas and a glossary of technical terms. The Contractor shall use its experience in developing interpretive materials to help stakeholders understand the components and terminology that accompany a state assessment program.

The Interpretive Guide shall be formatted in such a way that pertinent information can easily be copied at the school building for distribution to teachers or parents. The format shall have information that is specifically targeted to parents. This information shall start and end with page breaks so that a parent does not get a partial page with information before or after the page break that is out of

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context. Parent information pages and the teacher information pages shall each "stand alone." The guide shall be designed with specific text, graphics, and related materials for the desired audience. CDE will approve all materials prior to publishing. The Contractor shall print and deliver this document to Colorado schools based on a scheduled determined jointly by CDE and Contractor.

The Contractor shall produce and deliver this publication to CDE in ADA-compliant PDF files to be posted on CDE's website. The Contractor shall work with CDE to verify that the interpretive guide file posted to the Colorado website meet Section 508 accessibility requirements.

The URL for the Interpretive Guide shall appear on all levels of reports.

B.8. Psychometric, Research, and Technical Activities

B.8.1. <u>Work Plan</u>.

The Contractor shall adhere to the mutually agreed upon detailed schedule that outlines the tasks and durations for each year of the Contract. The draft schedule is included in Exhibit B.

B.8.2. <u>Field Testing</u>.

B.8.2.a. <u>Sampling Design</u>. The Contractor recommends that the field test sampling plan selects a diverse representation of Colorado students from throughout the state. Schools from districts small and large and urban and rural will be represented in the sampling plan. Field test materials will be shipped directly to districts.

B.8.2.b. <u>Psychometric Analysis of Field Test to Support Operational Assessment</u>. Item data from the field test of the CoAlt shall include the appropriate statistics. The Contractor shall provide CDE with all appropriate test statistics and information including test information functions, differential test function information, and validity and reliability measures from the field test. The Contractor shall establish reliability across test examiners. The Contractor will use the Rasch IRT Partial Credit Model to calibrate and equate the CoAlt. This will be accomplished with Winsteps v3.73. The Rasch difficulty, step thresholds, infit, and outfit statistics will be reported in the technical manual and in other appropriate venues. Depending on the results of the field test analysis, non-responses will either be scored as a separate category with

a score equal to zero, or will be collapsed into a single category along with incorrect responses.

The Contractor shall produce a report of recommendations for changes to the operational assessment based on field test results, including whether non-responses should receive the same scores as incorrect responses. The Contractor will also make recommendations for item weights in association with the decision about non-response scoring. The report shall include item development process revision recommendations, administration materials and process revision recommendations, and an analysis of anchor pools available for operational testing.

B.8.3. Operational Analysis. Item data from the operational assessment of the CoAlt must include appropriate IRT item and task parameters, bias sensitivity analysis, and fit based on the IRT model.

The Contractor shall provide the following item level statistics for each item used on the operational test—item mean score, and item score-test score correlation. The Contractor shall report the proportion of low, middle, and high scorers as well as the total proportion of all examinees that achieved each possible score point.

For all items that receive second check scores, the Contractor shall provide the following measures of inter-rater reliability—total n-count of examinees who received second scores, percent of perfect agreement, percent of adjacent scores, and percent of non-adjacent scores.

The Contractor shall screen items for DIF using the polytomous extensions to the Mantel Haenszel procedure. Groups of interest shall be determined in consultations with CDE and the Colorado TAC.

The Contractor shall provide IRT parameters and item-fit statistics for all items used operationally. With the Rasch model selected, the Contractor shall use WINSTEPS (Linacre, 2011) to calibrate the items using Joint Maximum Likelihood Estimation (JMLE) and to produce the raw score to scale score tables used for number correct scoring.

The Contractor shall produce a report of recommendations for changes to the future CoAlt based on operational assessment results. The report shall include item development process revision recommendations,

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administration materials and process revision recommendations, and an analysis of anchor pools available for future operational testing.

B.8.4.   Scaling and Standard Setting.

B.8.4.a.   Vertical Scale Design. The CoAlt for Science and Social Studies shall not be vertically scaled.

B.8.4.b.   Scaling. The Contractor shall work with CDE, and the Colorado TAC, to implement a scaling procedure for the CoAlt that will result in scale scores. The Contractor shall establish model fit and individual score reliability for the selected scaling procedure.

B.8.4.c.   Standard Setting (Educator Meeting). The Contractor shall use a standard setting process that uses empirical data to establish patterns of performance that correspond to achievement levels, such as Reasoned Judgment. Criteria for standard setting shall include student information from all of the assessment's item types. Procedures shall be approved by the Colorado TAC and CDE.

Standard setting panels shall include: K-12 educators, including those familiar with students with significant cognitive disabilities, as well as content experts; higher education educators; and representatives from the business community as appropriate. The Contractor shall use 8-10 member content specific panels which span 2-3 grade levels (for ELA and mathematics tests) or that address each of the elementary, middle, and high school level exams (for science and social studies) for standard setting. The Contractor shall be responsible for all costs associated with convening these panels for two to three day long meetings. These meetings will be scheduled to take place after the initial operational exams have been administered, scored, and all scaling analyses completed. They will also take place after the final cut scores for the summative assessment have been determined. The panelists will thus be making their decisions with feedback derived from the initial operational administration of the assessments.

After the conclusion of the standard settings, a subsequent panel will meet to review the cut scores and impacts for consistency within each subject across grades, across subjects within the CoAlt, and between the CoAlt and summative assessments. The composition of these panels is yet to be determined through discussion with the CDE, but

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could be subsets of the panelists from the just concluded standard setting, a different set of panelists, community and state leaders, CDE leadership, or some other group identified by the CDE.

The Contractor shall continue to show validation in successive years (2015 and beyond) through the Reasoned Judgment method to determine the appropriateness of equated cut scores. The Contractor shall link 2015 and 2014 tests by matching the student score distributions between the two (2) years. The raw scores that produce a similar percent of students in each performance level will be located and identified as the linked cut scores. Standards validation meetings and/or processes may impact reporting timelines for fiscal year 2015 and beyond.

The Contractor shall conduct CoAlt standards validation through a similar procedure as other standard setting methods to validate the previously set cut scores. As in the original standard setting, panelists shall first review CoAlt assessment frameworks and the item content maps. Next, panelists shall review the current performance level descriptors and evaluate the reasonableness of the linked cut scores in the contents of the changes made to the assessment. Score patterns shall be discussed and evaluated. If appropriate the panel shall make recommendations for modified cut scores and rationales for these suggested changes. The Contractor shall prepare a report for CDE. The Contractor shall prepare suggested communications for the field regarding potentially changing cut scores. Final decisions for changes in cut scores are the purview of CDE.

B.8.5. <u>Linking and Equating</u>. The Contractor shall post-equate the CoAlt using the Rasch IRT model.

B.8.6. <u>Plans for Establishing Technical Adequacy</u>.

B.8.6.a. <u>Peer Review Requirements</u>. The Contractor shall conduct the studies necessary to meet <u>all</u> requirements of the U.S. Department of Education's (EDs) *Standards and Assessment Peer Review Guidance*. The Contractor shall assist CDE in all areas necessary for a successful Peer Review of the CoAlt.

B.8.6.b. <u>Alignment Studies</u>. The Contractor shall work with a third-party contractor for independently conducted alignment studies of the CoAlt to the EEOs of the Colorado

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Academic Standards. CDE will have final approval of the third-party performing the study. The Contractor shall have the contractual and payment responsibilities for seeing that the study itself is completed.

B.8.6.c. <u>Technical Advisory Committee</u>. For the CoAlt component, the Contractor shall fund one (1) Colorado TAC member with technical expertise in special needs populations and accommodations. In advance of scheduled TAC meetings, the Contractor shall provide clearly stated questions and supporting background materials in a timely fashion for review by CDE and the Colorado TAC prior to Colorado TAC meetings. The Contractor shall be responsible for taking minutes and distributing meeting summaries to CDE and the TAC member within two business days.

TAC meeting costs shall be reconcilable, such that CDE shall not be responsible for paying TAC costs to the Contractor for a meeting that does not occur, or if the TAC member in this Contract is unable to attend. The Contractor shall assume that three, two-day TAC meetings will be conducted each year in Denver, Colorado. As deemed necessary by CDE, additional TAC members and meetings may be added at the same costing price. Any additional meetings shall be managed via a contract amendment.

The Contractor shall have two (2) representatives attend each meeting in person. Additional representative from the Contractor shall be available as needed upon prior request from CDE. With approval from CDE, the Contractor may opt for these additional personnel to participate via teleconference or via another distance communication technology.

The TAC member, for this assessment component, shall be given a $1,500 honorarium per day. He/she shall also be reimbursed for meals, mileage, or airfare, rental car or cab fees and lodging.

B.8.6.d. <u>Technical Report</u>. The Contractor shall complete the Elementary, Middle and High School Technical Report annually by August 15th following the end of the operational testing cycle. A formal technical report will not be produced for the initial standalone FT administration, but a summary of item level statistics will be completed. This summary may be incorporated into the following year's Technical report. The Contractor shall incorporate the following high level concepts to provide a thematic

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structure for the annual technical report centered on the establishment and explication of a solid validity framework:

- Description of the Target Student Population
- Test Design and Development
- Validity Framework and Argument
- Alignment
- Administration and Training and issues that arose during administration
- Accommodations and testing of students with special needs
- Core Beliefs and Guiding Philosophy of the CoAlt
- Summary of Test Administration Analyses
- Scoring and Reporting
- Security
- Reliability
- Validity
- Standard Setting
- Psychometric analyses (such as item analyses, DIF analyses, and fit statistics)
- IRT calibrations
- Equating and scaling
- Opportunity to learn data

Appendices shall include related materials such as administrative regulations, state standards, frequency/percentile distributions, summary tables providing data from technical analyses, state performance summaries by demographic group, and other pertinent information.

The Contractor shall deliver a Technical Report and Yearbook by August 15 of each operational administration year. An administration summary will be prepared for the standalone field test, but a formal technical report will not be prepared. This summary may be incorporated into the following year's Technical report. The Contractor's lead psychometrician shall facilitate the review of the annual Technical Report and Yearbook by CDE, CDE's Verification Vendor, and the TAC before the Contractor produces the copy for publication.

The Contractor shall report detailed results of all test administrations, as well as full details of all development and research activities conducted within that time frame, including item development and review, form construction and review, field testing, equating, validity, comparability, DIF, and reliability studies, etc., and any other activities

conducted in support of the Colorado Student Assessments since the last reporting period beginning with the first operational administration. Exact contents of the technical manual will be determined annually in collaboration with the TAC. The report must meet comply with the U.S. Department of Education's *Standards and Assessment Peer Review Guidance* (or similar document developed in the future).

B.8.7. Irregularity and Data Forensic Analysis. The Contractor shall institute the following statistical checks for the CoAlt:

- Year-to-year comparisons of changes in performance aggregated by school
- Analysis for schools where all students have a similar pattern of scores, indicating generation of scores without administration
- Review of abnormally consistent scores that could indicate generation of scores without administration
- Review of patterns that are at odds with the item level stats, e.g., a student who gets high scores on a couple of the most difficult items and low scores on a few of the easiest

The Contractor shall work with CDE and the Colorado TAC to examine the above and other possibilities for monitoring on an ongoing basis the performance of students and the scoring process in general throughout the course of the Contract to promote fairness and consistency throughout the assessment process.

B.9. Training and Support

B.9.1. Work Plan. The Contractor shall provide training and support for the CoAlt to Colorado educators as needed for this assessment component.

The Contractor's plan of action and timeline that describe how and when each of the training and support tasks will be accomplished is included in the CoAlt Meetings Figure below.

Colorado Alternate Educator Meetings						
Meeting Title	CDE Staff	Pearson Staff	Educators	Meetings per year	Number of Days	Face-to-Face or WebEx?
Assessment Administration Training	2	2	Minimum of 50 No more than 120	6	1	Face-to-Face in FY13-FY14 (WebEx in FY15+)
Understanding the Assessment Results Training	2	2	Minimum of 50 No more than 120	4	1	Face-to-Face FY14 (WebEx in FY15+)
Materials Management Training	2	2	Up to 75	2	1	WebEx FY13+
PearsonAccess™ Scorer Training	2	2	Up to 150	4	1	WebEx FY13+
Additional training: Topic to be determined annually	1	2	-	4	1	WebEx
Passage Review (Reading only– if option is executed)	2	2	15	1	1	Face-to-Face FY14-FY16
Science and Social Studies Item Development Meetings	2	4	20	2	2	Face-to-Face FY13-FY15+
English Language Arts and Math Item Development Meetings (if option is executed)	2	10	18	TBD	1-2	Face-to-Face FY13-FY17
Science and Social Studies Content and Bias/Sensitivity Review	2	4	26	1	2	Face-to-Face FY13-FY15
English Language Arts and Math Content and Bias/Sensitivity Review (if option is executed)	2	4	24	TBD	2	Face-to-Face FY14-FY18
Science and Social Studies Data Review	2	2	24	1	1	Face-to-Face in FY13; virtual FY14+
English Language Arts and Math Data Review (if option is executed)	2	2	30	TBD	1	Face-to-Face in FY14; virtual FY15+
Science and Social Studies Standard Setting	3	9	48	1	3	Face-to-Face in FY14 and FY15

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Colorado Alternate Educator Meetings						
Meeting Title	CDE Staff	Pearson Staff	Educators	Meetings per year	Number of Days	Face-to-Face or WebEx?
English Language Arts and Math Standard Setting	3	9	40	TBD	3	Face-to-Face in FY15

The Contractor's program team (including their technology consultant and psychometrician) shall develop draft training materials (hand-outs, PowerPoint slides, etc.) for CDE review, revision, and approval. The Contractor shall preview each training session and webinar for CDE staff at least two weeks prior to the scheduled training dates and make any necessary changes to the training materials before use. Training content and materials shall be approved by CDE before use. The Contractor shall adhere to the mutually agreed upon detailed schedule that outlines the tasks and durations for each year of the Contract. The draft schedule is included in Exhibit B.

The Contractor shall provide face-to-face and WebEx training to DACs and district trainers for the CoAlt. The above table indicates the training provision requirement for Year 1 and Year 2 of the assessment. For the first two years, CoAlt administration training will be conducted in a face-to-face environment. CDE will determine if the amount of training required may be reduced in subsequent years. At a minimum, subsequent years shall have one live WebEx for each of the two types of training.

For all face-to-face trainings the Contractor shall be responsible for all logistics and shall verify that facilities meet Americans with Disabilities Act (ADA) accessibility requirements. All trainings sessions will include oral and visual presentations and will incorporate interactive technology as appropriate. The Contractor shall ensure the provision of all training accommodations that are required by the ADA. All WebEx trainings will be archived and available for future use or reference.

B.9.2.   CoAlt Administration Training. The Contractor shall develop face-to-face and WebEx trainings for the administration of the CoAlt assessments. These trainings sessions shall cover test administration procedures, an overview of the online system, how to handle the most common issues, managing testing security, and a thorough explanation, scoring demonstration videos, and hands-on practice of online score entry procedures.

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The Contractor shall develop an additional WebEx training that shall focus on the logistics related to the CoAlt assessments, including the receipt of materials in the districts, the distribution of materials within the district, collecting materials for return to the Contractor, and the policies and procedures for maintaining security at all times.

Additionally, the Contractor shall develop a mandatory teacher scoring training session which will be conducted via WebEx with the Contractor's facilitator (see also section B.6.3.b).

The assessment manuals shall include the same types of information provided in these trainings which shall reinforce the training the DACs receive.

B.9.3. <u>Understanding the CoAlt Results Training</u>. The Contractor shall provide face-to-face training in FY 2014 and WebEx trainings through FY18 for DACs and District Special Education Directors to support analyzing and understanding CoAlt data in order to provide meaningful recommendations to their districts about curriculum and other policies. The Contractor shall include input and/or participation from their psychometrics team and content team in the development of these training materials.

The Interpretive Guide shall include the same types of information provided in these trainings which shall reinforce the training that the DACs and Special Education Directors receive.

B.9.4. <u>Webinars</u>. The Contractor shall conduct at least one (1) live WebEx for each of the types of training. One webinar shall describe and demonstrate the procedures for local educators to use to administer and score the CoAlt. The other webinar shall be used to assist local educators to understand, use, and report the results from the CoAlt. The Contractor shall record these trainings and make them always-available-trainings as an additional resource for district personnel who may not be able to attend the face-to-face session on administration training or to share important assessment information with their colleagues. These webinars shall be posted online at the Assessment Unit website.

The live WebEx shall include opportunities for participants to ask questions and interact with presenters either via text chat or voice. An additional WebEx may be based off of recordings of the Face-to-Face training sessions or created as unique training sessions.

The Contractor shall supply online and conference call opportunities for training for those unable to attend a face-to-face or live session.

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B.9.5. <u>Online Training Support</u>. The Contractor shall create training materials and provide customer support specific to online reporting of assessment raw scores.

The training materials shall at least include a PearsonAccess™ user manual with an easy to understand set of directions, including screenshots, for operating the reporting of assessment raw scores software.

B.10. Customer Service

The Contractor shall provide technical and logistical support in a responsive manner which minimizes school personnel and student burden, disruption and inconvenience.

B.10.1. <u>District Assessment Coordinator Routine Communications/ Notifications</u>. The Contractor's program management team for the CoAlt shall work with CDE to determine the types of communications and notifications that should be directed to the DACs. The communications shall be provided to CDE for sending via a listserv that is currently in use.

B.10.2. <u>Telephone and E-mail Support</u>. The Contractor's Customer Service Center (CSC) personnel will be trained specifically for the CoAlt program. Customers will have access to live support via email and a dedicated toll-free phone number from 7:00 a.m. to 6:00 p.m. Mountain Time each weekday, excluding federal and Colorado state holidays. Customer service personnel must be able to clearly articulate spoken English. The customer service center must be located within the 48 contiguous states. CDE reserves the right to approve the Customer service lead.

When customer service staff is not available to take a call, a voicemail service system must be available to record the caller's message. Messages must be returned in a timely manner, generally within one hour or less but always within one business day.

DACs may also submit their questions via e-mail to the Project Manager and must receive a response to their e-mail within 24 hours.

B.10.3. <u>Issue Resolution System</u>. Customer service staff shall have a system to ensure that issues raised by DACs have been satisfactorily resolved. For example, if a DAC has requested additional assessment materials, the system shall ensure that 1) the DAC is given instructions on how to order the materials online and that 2) the customer service representative will verify that the order has been placed and fulfilled. The Contractor shall notify CDE of any

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communication with the field regarding urgent or sensitive issues. If an issue arises that requires executive engagement and authority for resolution, the Contractor's First Response protocol will provide proper guidance to the Contractor's personnel. This protocol calls for the evaluation of corrective actions and establishes how an issue will be tracked until its closure. This protocol will keep CDE aware of the issue and how it is being resolved.

B.10.4. Records of Interaction with Customers. All contacts shall be tracked by the Contractor's Service Management software, a secure incident-tracking software tool tailored specifically for the Contractor's Customer Service Center (CSC). With each incoming contact, CSC staff will generate a ticket that enables tracking the incident through to resolution. The system will collect customer name, district, school, date and time of incoming contact, issue description and resolution, and date and time of issues and resolution. Tickets will be archived and ticket numbers will also be provided to the customer. Tickets may be escalated to specialists for their documentation when handling calls to generate a full history of each issue. Sortable reports from the Contractor's incident tracking system are available to CDE for review in electronic format.

B.10.5. Customer Service Initiated Calls and Communications. All CoAlt-specific training for CSC, including any scripts, shall be drafted and provided to CDE for final approval. Additionally, customer service staff may be asked to initiate e-mail communications in unusual circumstances by CDE.

B.10.6. Customer Feedback Survey. The Contractor shall create and administer at least once annually a customer feedback survey, including both close ended and open ended items. The survey will record feedback on customer satisfaction with score submission, ordering, fulfillment, security, receiving, returning, and other criteria consistent with best business practices. The Contractor will be responsible for compiling responses. The feedback surveys will be available to CDE for review. They will also be used in planning for the next year's program. Annually, the Contractor will survey CDE decision-makers reviewing products and services.

B.10.7. DAC Website. The Contractor shall develop and maintain a website for DACs via Contractor-provided login names and passwords to access training and assessment materials. This website will contain both secure and unsecure documents necessary for the DACs to perform their duties and responsibilities. These documents include Test Examiner and Test Coordinator manuals, training manuals, data interpretation manuals, as well as various order and request

forms. In addition, the site shall provide DACs with access to their district assessment data and scores.

The Contractor's web access management solution will be rules-based, allowing or denying access based on definable user attributes. This web access tool, PearsonAccess™, will be configured according to Colorado requirements and determine access privileges for individuals or groups of users at the state, district, and school levels.

B.10.8. <u>Customer Support</u>. In addition to the "help" functions embedded in the score reporting software and automated online or phone in support services, the Contractor shall provide customer support for the use of the alternate assessment online score reporting software that includes phone accessible support personnel.

The Contractor's CSC staff members will be trained on the specifics of the Colorado program. Callers from Colorado will have access to live support via email and a dedicated toll-free phone number. The Contractor's specialists with detailed program information and focused expertise in the database, network, infrastructure, and software components of the Contractor's web-based services will respond to questions that cannot be resolved at the initial point of contact.

Colorado Student Assessments
Pearson Organizational Chart

Doug Kubach
CEO,
Assessment &
Information

→

Walter Sherwood
President,
Assessment & Information

→

Jim Hill
Vice President,
State Services

Jennifer Riley
Alternate Program
Manager

Will Bunting
CMAS Senior Program
Manager

Amy Miller
Senior Project Manager

Jeff Burklo
Technology Consultant

Becky Szafranski
Senior Test
Development Manager

Dr. Jennifer Beimers
Lead, Senior Research
Scientist

Michelle DeAngelo
Program Technology
Manager

Ross Holstein
Performance Scoring
Program Manager

Al Rosado
Production Manager

Dave Erichson
Senior Project Manager,
Technology & Online
Testing, Summative

Brian Martens
Senior Project Manager
Online Implementation

Nate Roelfs
Content Project
Manager

Nita Inani
(ITPM) Information
Technology Program
Manager

Scott Myre
Performance Scoring
Project Manager

Jonathan Menzner
Production Service
Manager

Anna Gutierrez
Project Manager

Sandy Watson
Special Populations
Consultant

Narda Wall
Customer Business
Analyst

Dave Adams
Social Studies Scoring
Content Specialist

David Frank
Senior Publishing
Implentation Manager

Danielle Schumacher
Project Coordinator

Jennifer Carle
Science Content
Specialist

Patricia Solalinde
Science Scoring
Content Specialist

Lauren Chiang
Editorial Project
Manager

Jolana Rivas
Social Studies
Content Specialist

Tiffany Ford
Social Studies
Content Specialist

Colorado Alternate Assessment
Organizational Chart

```
Doug Kubach          →    Walter Sherwood      →    Jim Hill
CEO,                       President,                Vice President,
Assessment &               Assessment & Information  State Services
Information
                                                          ↓
                                                     Jennifer Riley
                                                     Program Manager
```

Amy Miller	Katie Schmidt	Dr. Jennifer Beimers	Michelle DeAngelo	Al Rosado
Senior Project Manager	Senior Test Development Manager & Lead Alternate Assessment Specialist	Lead, Senior Research Scientist	Program Technology Manager	Production Manager

Amy Miller (Senior Project Manager) branch:
- Dave Erichson — Senior Project Manager
- Anna Gutierrez — Project Manager
- Danielle Schumacher — Project Coordinator
- Lauren Chiang — Editorial Project Manager

Katie Schmidt branch:
- Nate Roelfs — Content Project Manager
- Sandy Watson — Alternate Assessment Specialist
- Elaine Curry — Alternate Assessment Specialist
- Jennifer Carle — Science Content Specialist
- Tiffany Ford — Social Studies Content Specialist

Michelle DeAngelo (Program Technology Manager) branch:
- Nita Inani — (ITPM) Information Technology Program Manager
- Narda Wall — Customer Business Analyst

Al Rosado (Production Manager) branch:
- Jonathan Menzner — Production Service Manager

Attachment 2: Allocation of Key Personnel

Colorado Student Assessments Pearson Program Team		
Name	**Title**	**Time Commitment**
Program Management Team		
Jim Hill	Vice President, State Services	25% Executive Oversight
Will Bunting	Senior Program Manager	100% Summative
Jennifer Riley	Program Manager	100% Alternate; Summative support
Amy Miller	Senior Project Manager	50% Summative; 50% Alternate
Dave Erichson	Senior Project Manager, Online Testing	50% Summative; 50% Alternate
Anna Gutierrez	Project Manager	50% Summative; 50% Alternate
Danielle Schumacher	Project Coordinator	50% Summative; 50% Alternate
Lauren Chiang	Editorial Project Manager	45% Summative; 45% Alternate
Jeff Burklo	Program Technology Consultant	50% in 2013–2014 25% in 2015–2017 Summative
Rebecca Szafranski	Senior Test Development Manager	100% Summative
Katie Schmidt	Senior Test Development Manager and Lead Alternate Assessment Specialist	50% Alternate
Pearson Psychometric and Research Team		
Dr. Jon Twing	Chief Measurement Officer	As needed; policy consultation/strategic advisor
Dr. Walter "Denny" Way	Senior Vice President, Psychometric and Research Services	Executive Oversight
Dr. Julie Miles	Vice President, Measurement Services	Executive Oversight
Dr. Jennifer Beimers	Lead, Senior Research Scientist	50% Summative; 50% Alternate

Colorado Student Assessments Pearson Program Team		
Name	**Title**	**Time Commitment**
Pearson Content Development Team		
Nate Roelfs	Content Project Manager	75% Summative; 25% Alternate
Elaine Curry	Alternate Assessment Specialist	50% Alternate (Science)
Sandy Watson	Alternate Assessment Specialist	50% Alternate (Social Studies); 10% Summative
Jennifer Carle	Lead Science Content Specialist (Summative and CoAlt Lead)	75% Summative; 25% Alternate
Jolana Rivas	Social Studies Content Specialist (Summative Lead)	100% Summative
Tiffany Ford	Social Studied Content Specialist (CoAlt Lead)	50% Summative; 50% Alternate
Pearson Scoring Team		
Ross Holstein	Performance Scoring Program Manager	10% Summative
Scott Myre	Performance Scoring Project Manager	50% Summative
Dave Adams	Content Specialist, Social Studies	20% Summative
Patricia Solalinde	Content Specialist, Science	20% Summative
Pearson Technology Team		
Michelle DeAngelo	Program Technology Manager	30% Summative; 15% Alternate
Nita Inani	IT Project Manager	30% Summative; 20% Alternate
Narda Wall	Customer Business Analyst	45% Summative; 25% Alternate
Support Team		
Al Rosado	Pearson Director of Operations	15% Summative; 5% Alternate
Jonathan Menzner	Production Service Manager	15% Summative; 5% Alternate
David Frank	Senior Publishing Implementation Manager	35% Summative

Attachment 3: Researchers List

Suggested Members of the Colorado Research Alliance	
Organization	**Participant(s)**
Wayne J. Camara	Vice President, Research & Analysis, College Board
Andrew C. Porter	Dean, University of Pennsylvania, Graduate School of Education
Gregory Camille	Professor, University of Colorado
Eva Baker	Co-Director, UCLA Center for the Study of Evaluation (CSE)/National Center for Research on Evaluation, Standards, and Student Testing (CRESST)
Lloyd Bond	Senior Scholar, Carnegie Foundation for the Advancement of Teaching
David Bressoud	DeWitt Wallace Professor & Chair Mathematics and Computer Science, Macalester College
Francis (Skip) Fennell	Professor of Education, McDaniel College
Henry (Hank) Kepner	Mathematics Education, Department of Curriculum & Instruction and Mathematical Sciences, University of Wisconsin, Milwaukee
Robert Linn	Co-Director, CRESST, University of Colorado at Boulder
Bernard Madison	Professor of Mathematics, Department of Mathematical Sciences, University of Arkansas
William Schmidt	University Distinguished Professor, Third International Mathematics and Science Study (TIMSS), Michigan State University
James Sellers	Associate Professor and Director of Undergraduate Mathematics, Penn State University

Suggested Members of the Colorado Research Alliance	
Organization	**Participant(s)**
Sharif Shakrani	Director, Education Policy Center, Michigan State University
David S. Spence	President, Southern Regional Education Board
Uri Treisman	Director, Charles A. Dana Center
Jon S. Twing, PhD	Chief Measurement Officer, Pearson
Denny Way, Ph.D.	SVP, Pearson
Gregory M. Tobin	Pearson Addison-Wesley
Lynn Streeter, PhD	Pearson Knowledge Technologies (PKT)

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
0	2013/2014 Colorado	663 days	Fri 2/1/13	Mon 8/31/15	
1	Colorado General and Fall 2013	474 days	Fri 2/1/13	Mon 12/8/14	
2	1.0 PROJECT PLANNING AND COMMUNICATION	81 days	Wed 5/1/13	Fri 8/23/13	
3	Planning Meeting for Fall 2013	0 days	Tue 7/2/13	Tue 7/2/13	
4	Agenda Created	0 days	Tue 7/2/13	Tue 7/2/13	PMT
5	Materials Prepared	0 days	Tue 7/2/13	Tue 7/2/13	PMT
6	CDE/Pearson Planning Meeting	0 days	Tue 7/2/13	Tue 7/2/13	CDE,Pearson
7	Minutes distributed	0 days	Tue 7/2/13	Tue 7/2/13	PMT
8	Fall 2013 Project Schedule	27 days	Mon 6/3/13	Wed 7/10/13	
9	Draft Project Schedule Created/Meetings and reviews with shared services groups	23 days	Mon 6/3/13	Wed 7/3/13	PMT
10	Internal Baseline	0 days	Wed 7/3/13	Wed 7/3/13	PMT
11	Project Schedule - CDE Review	3 days	Fri 7/5/13	Tue 7/9/13	CDE
12	Project Schedule - CDE and Pearson Review	1 day	Wed 7/10/13	Wed 7/10/13	CDE,Pearson
13	Program Schedule Baselined	0 days	Wed 7/10/13	Wed 7/10/13	PMT
14	Customer Requirements Documentation	61 days	Wed 5/1/13	Fri 7/26/13	
15	CoAlt Program Synopsis (P&D)	13 days	Mon 6/10/13	Wed 6/26/13	
16	Develop Synopsis	2 days	Mon 6/10/13	Tue 6/11/13	PMT-Dani
17	Program Team review Program Synopsis	2 days	Wed 6/12/13	Thu 6/13/13	PMT
18	Draft Synopsis Peer reviewed	4 days	Fri 6/14/13	Wed 6/19/13	PMT,PC
19	Correct Synopsis Deficiencies	3 days	Thu 6/20/13	Mon 6/24/13	PMT
20	Final team review/approval	2 days	Tue 6/25/13	Wed 6/26/13	PMT,PC
21	Synopsis Approved for Baseline	0 days	Wed 6/26/13	Wed 6/26/13	
22	Scoring CRQ - Summ and Alt separate	19 days	Mon 5/13/13	Fri 6/7/13	
23	Create Draft Scoring CRQ	10 days	Mon 5/13/13	Fri 5/24/13	BA
24	Draft Scoring CRQ Peer Reviewed	3 days	Fri 5/31/13	Tue 6/4/13	ITPM,PMT,BA
25	Correct Scoring CRQ Deficiencies	2 days	Wed 6/5/13	Thu 6/6/13	BA
26	Scoring CRQ Approved & Baselined	1 day	Fri 6/7/13	Fri 6/7/13	BA
27	Student Data File Layouts (Reporting CRQs) - CoAlt and Summ	6 days	Fri 5/3/13	Fri 5/10/13	
28	Create Draft Reporting CRQ (roll over from fall)	1 day	Fri 5/3/13	Fri 5/3/13	BA
29	Draft Reporting CRQ Peer Reviewed	1 day	Mon 5/6/13	Mon 5/6/13	BA,ITPM,PMT
30	Correct Reporting CRQ Deficiencies	1 day	Tue 5/7/13	Tue 5/7/13	BA
31	CDE Review/Approval of Student Data File Layout	2 days	Wed 5/8/13	Thu 5/9/13	CDE,CDE-Jessica
32	Reporting CRQ Approved & Baselined	1 day	Fri 5/10/13	Fri 5/10/13	BA
33	P&D CRQ - CoAlt	12 days	Wed 5/1/13	Thu 5/16/13	
34	P&D Customer Requirements Questionnaire (CRQ) Drafted	5 days	Wed 5/1/13	Tue 5/7/13	BA
35	CDE review of P&D CRQ	3 days	Wed 5/8/13	Fri 5/10/13	CDE
36	Incorporate customer feedback and review internally	3 days	Mon 5/13/13	Wed 5/15/13	BA
37	Customer Requirements Questionnaire (CRQ) Baselined	1 day	Thu 5/16/13	Thu 5/16/13	BA
38	Score Form IDs, Test Number, and Test Name provided to RA by BA	1 day	Tue 7/2/13	Tue 7/2/13	BA
39	CM 2: Customer Requirements (Materials Distribution) Baselined	0 days	Fri 7/26/13	Fri 7/26/13	Stoplight
40	CM 3: Customer Requirements (Results) Baselined	0 days	Fri 7/26/13	Fri 7/26/13	Stoplight
41	Pearson Call Center	15 days	Tue 7/30/13	Mon 8/19/13	
42	Prepare training materials	5 days	Tue 7/30/13	Mon 8/5/13	PMT-Dani
43	CDE review/approval of training materials	5 days	Tue 8/6/13	Mon 8/12/13	CDE
44	Training Held	1 day	Mon 8/19/13	Mon 8/19/13	PMT-Dani
45	Sales Force/CVENT	61 days	Thu 5/30/13	Fri 8/23/13	
46	Update database qualifications	1 day	Thu 5/30/13	Thu 5/30/13	Darren Hearn
47	Create survey to distribute to educators that need to update qualificaitons	1 day	Wed 6/12/13	Wed 6/12/13	PMT-Dani
48	CDE review/approval of survey (to update qualifications)	28 days	Wed 6/19/13	Mon 7/29/13	CDE
49	Send survey	2 days	Tue 7/30/13	Wed 7/31/13	PMT-Dani
50	Follow up with outstanding surveys	1 day	Thu 8/8/13	Thu 8/8/13	PMT-Dani
51	Close survey	1 day	Fri 8/16/13	Fri 8/16/13	PMT-Dani
52	Amend qualifications in database manually with support from CSC if possible	5 days	Mon 8/19/13	Fri 8/23/13	PMT-Dani

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
53	AIQ Test Case Documents - Summ and Alt are separate (2 deliverables)	15 days	Mon 6/24/13	Tue 7/16/13	
54	CoAlt	10 days	Thu 6/27/13	Fri 7/12/13	
55	Develop Test Cases	5 days	Thu 6/27/13	Wed 7/3/13	AIQ
56	Peer Review & Approval	5 days	Fri 7/5/13	Thu 7/11/13	AIQ,PMT,IT
57	Test Cases Approved	0 days	Fri 7/12/13	Fri 7/12/13	AIQ
58	Summ - ES/MS	10 days	Tue 6/25/13	Wed 7/10/13	
59	Develop Test Cases	5 days	Tue 6/25/13	Mon 7/1/13	AIQ
60	Peer Review & Approval	5 days	Tue 7/2/13	Tue 7/9/13	AIQ,PMT,IT
61	Test Cases Approved	0 days	Wed 7/10/13	Wed 7/10/13	AIQ
62	Summ - HS	15 days	Mon 6/24/13	Tue 7/16/13	
63	Develop Test Cases	5 days	Mon 6/24/13	Fri 6/28/13	AIQ
64	Peer Review & Approval	5 days	Mon 7/1/13	Mon 7/8/13	AIQ,PMT,IT
65	Test Cases Approved	5 days	Mon 7/8/13	Tue 7/16/13	AIQ
66	Field Test Recruiting (JENNIFER TO PROVIDE after onsite Jul mtg)	5 days	Tue 7/2/13	Tue 7/9/13	
67	Draft plan for CDE review/approval	1 day	Tue 7/2/13	Tue 7/2/13	PMT-Jennifer
68	Create draft letter for CDE outreach	1 day	Tue 7/2/13	Tue 7/2/13	PMT-Jennifer
69	CDE review/approval of plan and letter	1 day	Tue 7/2/13	Tue 7/2/13	CDE
70	Draft plan approved	1 day	Tue 7/2/13	Tue 7/2/13	CDE
71	Draft surveys	1 day	Tue 7/2/13	Tue 7/2/13	PMT-Jennifer
72	CDE review/approval of surveys	0 days	Tue 7/2/13	Tue 7/2/13	CDE
73	Distribute Surveys	1 day	Tue 7/2/13	Tue 7/2/13	PMT-Jennifer
74	Follow up on outstanding surveys and close out data	5 days	Tue 7/2/13	Tue 7/9/13	PMT-Dani
75	Determine FT participants per plan established with CDE	5 days	Tue 7/2/13	Tue 7/9/13	PMT-Jennifer
76	2.0 SUPPORTING DOCUMENTS AND TRAINING	90 days	Wed 6/19/13	Fri 10/25/13	
77	Security Procedures	21 days	Mon 7/8/13	Mon 8/5/13	
78	Security Plan updated, if needed	15 days	Mon 7/8/13	Fri 7/26/13	PMT,CDE
79	CDE Review	5 days	Mon 7/29/13	Fri 8/2/13	CDE
80	Baseline Approval	1 day	Mon 8/5/13	Mon 8/5/13	PMT,CDE
81	Manuals/Memos	79 days	Wed 6/19/13	Wed 10/9/13	
82	District/School Assessment Coordinator's Manual	56 days	Tue 7/2/13	Thu 9/19/13	
83	Update previous year manual	9 days	Tue 7/2/13	Mon 7/15/13	Manuals
84	CDE pp1 review of Manual	5 days	Tue 7/16/13	Mon 7/22/13	CDE
85	Changes incorporated	5 days	Tue 7/23/13	Mon 7/29/13	Manuals
86	CDE PP2 Review	5 days	Tue 7/30/13	Mon 8/5/13	CDE
87	Changes incorporated to manual from second review/PMT review	7 days	Tue 8/6/13	Wed 8/14/13	Manuals
88	CDE PP3 Review	3 days	Thu 8/15/13	Mon 8/19/13	CDE
89	Changes incorp.	5 days	Tue 8/20/13	Mon 8/26/13	Manuals
90	Proofreading	2 days	Tue 8/27/13	Wed 8/28/13	Proofreading
91	CDE Final Review/Approval of Manual	2 days	Tue 8/27/13	Wed 8/28/13	CDE
92	Finalize Manual for printing	3 days	Thu 8/29/13	Tue 9/3/13	Manuals,Design
93	Develop and approve Vendor PDF	2 days	Wed 9/4/13	Thu 9/5/13	Design,PMT,Manuals
94	Develop and get approval for online, accessible PDF	5 days	Fri 9/6/13	Thu 9/12/13	Manuals
95	Post manual to CDE website and PearsonAccess	5 days	Fri 9/13/13	Thu 9/19/13	PMT
96	Examiner's Manual	55 days	Tue 7/2/13	Wed 9/18/13	
97	Update existing manual	20 days	Tue 7/2/13	Tue 7/30/13	
98	PMT Initial Review	15 days	Tue 7/2/13	Tue 7/23/13	PMT
99	Manuals team works with designers, applies PMT edits, creates initial draft	15 days	Tue 7/2/13	Tue 7/23/13	Manuals
100	PMT review	3 days	Wed 7/24/13	Fri 7/26/13	PMT
101	Manuals team preps 1st PP	2 days	Mon 7/29/13	Tue 7/30/13	Manuals
102	CDE review of pp1	2 days	Wed 7/31/13	Thu 8/1/13	CDE
103	Changes incorporated	7 days	Fri 8/2/13	Mon 8/12/13	
104	Manuals team works with designers, applies CDE edits, follows up with PMT regarding quires	3 days	Fri 8/2/13	Tue 8/6/13	Manuals
105	PMT review	3 days	Wed 8/7/13	Fri 8/9/13	PMT

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
106	Manuals team preps 2nd PP	1 day	Mon 8/12/13	Mon 8/12/13	Manuals
107	CDE review of pp2	2 days	Tue 8/13/13	Wed 8/14/13	CDE
108	Changes incorporated to manual from second review	7 days	Thu 8/15/13	Fri 8/23/13	
109	Manuals team works with designers, applies CDE edits, follows up with PMT regarding quires	2 days	Thu 8/15/13	Fri 8/16/13	Manuals
110	PMT review	2 days	Mon 8/19/13	Tue 8/20/13	PMT
111	Manuals team preps FINAL PP	3 days	Wed 8/21/13	Fri 8/23/13	Manuals
112	Proofreading/incorporating minor edits	2 days	Mon 8/26/13	Tue 8/27/13	Proofreading
113	CDE final pp review and approval	2 days	Wed 8/28/13	Thu 8/29/13	CDE
114	Finalize manual for printing	2 days	Fri 8/30/13	Tue 9/3/13	Manuals
115	Post manual to CDE website and PearsonAccess	11 days	Wed 9/4/13	Wed 9/18/13	PMT
116	Proctor's Manual - ES/MS (DID 9/9)	49 days	Wed 6/19/13	Tue 8/27/13	
117	Update existing manuals including PMT reviews and sends to CDE	10 days	Wed 6/19/13	Tue 7/2/13	PMT,Manuals,DPSS
118	Review 1st Page Proof of manual by CDE	5 days	Wed 7/3/13	Wed 7/10/13	CDE
119	Changes incorporated to manual/ PMT Review	7 days	Thu 7/11/13	Fri 7/19/13	Manuals,DPSS
120	Review 2nd Page Proof of manual by CDE	5 days	Mon 7/22/13	Fri 7/26/13	CDE
121	Changes incorporated to manual/ PMT Review	7 days	Mon 7/29/13	Tue 8/6/13	Manuals,DPSS
122	3-way check of Teacher Read Directions and send results to PMT	2 days	Wed 8/7/13	Thu 8/8/13	Manuals,Call Center
123	Proofreading reviews manual	3 days	Fri 8/9/13	Tue 8/13/13	Proofreading
124	CDE reviews final page proof for approval	5 days	Wed 8/14/13	Tue 8/20/13	CDE
125	Finalize manual for Printing	4 days	Wed 8/21/13	Mon 8/26/13	
126	Post Proctor manual to CDE website and PearsonAccess	1 day	Tue 8/27/13	Tue 8/27/13	PMT
127	Proctor's Manual - HS (DID 10/21)	58 days	Mon 7/15/13	Thu 10/3/13	
128	Update existing manuals including PMT reviews and sends to CDE	10 days	Mon 7/15/13	Fri 7/26/13	PMT,Manuals,DPSS
129	Review 1st Page Proof of manual by CDE	5 days	Mon 7/29/13	Fri 8/2/13	CDE
130	Changes incorporated to manual/ PMT Review	10 days	Mon 8/5/13	Fri 8/16/13	Manuals,DPSS
131	Review 2nd Page Proof of manual by CDE	5 days	Mon 8/19/13	Fri 8/23/13	CDE
132	Changes incorporated to manual/ PMT Review	10 days	Mon 8/26/13	Mon 9/9/13	Manuals,DPSS
133	3-way check of Teacher Read Directions and send results to PMT	3 days	Tue 9/10/13	Thu 9/12/13	Manuals,Call Center
134	Proofreading reviews manual	5 days	Fri 9/13/13	Thu 9/19/13	Proofreading
135	CDE reviews final page proof for approval	5 days	Fri 9/20/13	Thu 9/26/13	CDE
136	Finalize manual for Printing	4 days	Fri 9/27/13	Wed 10/2/13	
137	Post Proctor manual to CDE website and PearsonAccess	1 day	Thu 10/3/13	Thu 10/3/13	PMT
138	Memo for Summative Test Materials	14 days	Mon 7/15/13	Thu 8/1/13	
139	Update memo	4 days	Mon 7/15/13	Thu 7/18/13	PMT-Anna
140	CDE Review/Approval	5 days	Fri 7/19/13	Thu 7/25/13	CDE-Glen,CDE
141	Post to PA	5 days	Fri 7/26/13	Thu 8/1/13	PMT-Coordinator
142	ePAT Guides	51 days	Mon 7/29/13	Wed 10/9/13	
143	Receive Scoring information, rubric from ETS	0 days	Mon 7/29/13	Mon 7/29/13	Manuals
144	Update previous year manual (ETS, PMT, Manuals)	5 days	Tue 7/30/13	Mon 8/5/13	Manual
145	CDE pp1 review of Manual	4 days	Tue 8/6/13	Fri 8/9/13	CDE
146	Changes incorporated to manual/addition of Summative	5 days	Mon 8/12/13	Fri 8/16/13	Manuals
147	CDE PP2 Review	5 days	Mon 8/19/13	Fri 8/23/13	CDE
148	Changes incorporated to manual from second review/PMT review	7 days	Mon 8/26/13	Wed 9/4/13	Manuals
149	CDE PP3 Review	3 days	Thu 9/5/13	Mon 9/9/13	CDE
150	Changes incorp.	5 days	Tue 9/10/13	Mon 9/16/13	Manuals
151	Proofreading	2 days	Tue 9/17/13	Wed 9/18/13	Proofreading
152	CDE Final Review/Approval of Manual	2 days	Tue 9/17/13	Wed 9/18/13	CDE
153	Finalize Manual for printing	3 days	Thu 9/19/13	Mon 9/23/13	Manuals,Design
154	Develop and approve Vendor PDF	2 days	Tue 9/24/13	Wed 9/25/13	Design,PMT,Manuals
155	Develop and get approval for online, accessible PDF	5 days	Thu 9/26/13	Wed 10/2/13	Manuals
156	Post manual to CDE website and PearsonAccess	5 days	Thu 10/3/13	Wed 10/9/13	PMT
157	memo plan (standard memos)--Create memo plan for CDE review/approval	10 days	Thu 8/1/13	Wed 8/14/13	PMT
158	Certification Form (combined for both programs)	19 days	Mon 7/15/13	Thu 8/8/13	

ID	Task Name	Duration	Start	Finish	Resource Names
					CO Summative and Alternate Schedule - FY2014
159	Develop Certification Forms - CoAlt and Summative	10 days	Mon 7/15/13	Fri 7/26/13	PMT
160	CDE Review	2 days	Mon 7/29/13	Tue 7/30/13	CDE
161	Finalize Certification Forms	5 days	Wed 7/31/13	Tue 8/6/13	PMT
162	CDE Approval	2 days	Wed 8/7/13	Thu 8/8/13	CDE
163	Memo for CoAlt Test Materials	10 days	Tue 7/2/13	Tue 7/16/13	PMT-Dani
164	Training Modules posted to PA	43 days	Tue 7/2/13	Fri 8/30/13	PMT-Dani
165	WebEx Trainings	66 days	Fri 7/12/13	Tue 10/15/13	
166	Finalize plan with CDE	1 day	Fri 7/12/13	Fri 7/12/13	PMT-Dave,PMT-Dani
167	PearsonAccess Training: Getting Started	48 days	Fri 7/26/13	Wed 10/2/13	
168	Draft invite	1 day	Fri 7/26/13	Fri 7/26/13	PMT
169	CDE review/approve invite	4 days	Fri 7/26/13	Thu 8/1/13	CDE
170	Send invite (2 wks prior to training)	1 day	Thu 8/22/13	Thu 8/22/13	PMT
171	Draft training presentation materials (DS)	4 days	Fri 7/26/13	Wed 7/31/13	PMT
172	CDE review of training presentation materials (dry run takes place during this time)	8 days	Fri 8/2/13	Tue 8/13/13	CDE
173	Finalize materials	5 days	Wed 8/14/13	Tue 8/20/13	PMT
174	CDE Approval	3 days	Wed 8/21/13	Fri 8/23/13	CDE
175	1st Training held by PMT	1 day	Wed 9/4/13	Wed 9/4/13	PMT,CDE,CO Districts
176	2nd Training held by PMT	1 day	Wed 10/2/13	Wed 10/2/13	PMT,CDE,CO Districts
177	Training posted to PA	2 days	Thu 9/5/13	Fri 9/6/13	PMT
178	PearsonAccess Training: Student Data Upload (SDU)	49 days	Fri 7/26/13	Thu 10/3/13	
179	Draft invite	1 day	Fri 7/26/13	Fri 7/26/13	PMT
180	CDE review/approval of invite	4 days	Fri 7/26/13	Thu 8/1/13	CDE
181	Send invite (2 wks prior to training)	1 day	Thu 8/22/13	Thu 8/22/13	PMT
182	Draft training presentation materials (DJE)	4 days	Fri 7/26/13	Wed 7/31/13	PMT
183	CDE review of training presentation materials(dry run takes place during this time)	8 days	Thu 8/1/13	Mon 8/12/13	CDE
184	Finalize materials	5 days	Tue 8/13/13	Mon 8/19/13	PMT
185	CDE approves materials	3 days	Tue 8/20/13	Thu 8/22/13	CDE
186	1st Training held by PMT (sent list of attendees to CDE)	2 days	Wed 9/4/13	Thu 9/5/13	PMT,CDE,CO Districts
187	2nd training held by PMT (sent list of attendees to CDE)	1 day	Thu 10/3/13	Thu 10/3/13	PMT,CDE,CO Districts
188	Training posted to PA	2 days	Fri 9/6/13	Mon 9/9/13	PMT
189	Summative PearsonAccess Training: TestNav and Practice Test Training	52 days	Fri 7/26/13	Tue 10/8/13	
190	Draft invite	1 day	Fri 7/26/13	Fri 7/26/13	PMT
191	CDE review/approval of invite	4 days	Fri 7/26/13	Thu 8/1/13	CDE
192	Send invite (2 wks prior to training)	1 day	Thu 8/22/13	Thu 8/22/13	PMT
193	Draft training presentation materials (DJE)	4 days	Fri 7/26/13	Wed 7/31/13	PMT
194	CDE review of training presentation materials(dry run takes place during this time)	8 days	Thu 8/1/13	Mon 8/12/13	CDE
195	Finalize materials	5 days	Tue 8/13/13	Mon 8/19/13	PMT
196	CDE approves materials	3 days	Tue 8/20/13	Thu 8/22/13	CDE
197	1st Training held by PMT (sent list of attendees to CDE)	2 days	Thu 9/5/13	Fri 9/6/13	PMT,CDE,CO Districts
198	2nd training held by PMT (sent list of attendees to CDE)	1 day	Tue 10/8/13	Tue 10/8/13	PMT,CDE,CO Districts
199	Training posted to PA	2 days	Mon 9/9/13	Tue 9/10/13	PMT
200	Summative and CoAlt PearsonAccess Training: Before Testing	53 days	Fri 7/26/13	Wed 10/9/13	
201	Draft invite	1 day	Fri 7/26/13	Fri 7/26/13	PMT
202	CDE review/approval of invite	4 days	Fri 7/26/13	Thu 8/1/13	CDE
203	Send invite (2 wks prior to training)	1 day	Thu 8/22/13	Thu 8/22/13	PMT
204	Draft training presentation materials (DS/DJE)	4 days	Fri 7/26/13	Wed 7/31/13	PMT
205	CDE review of training presentation materials(dry run takes place during this time)	8 days	Thu 8/1/13	Mon 8/12/13	CDE
206	Finalize materials	5 days	Tue 8/13/13	Mon 8/19/13	PMT
207	CDE approves materials	3 days	Tue 8/20/13	Thu 8/22/13	CDE
208	1st Training held by PMT (sent list of attendees to CDE)	2 days	Fri 9/6/13	Mon 9/9/13	PMT,CDE,CO Districts
209	2nd training held by PMT (sent list of attendees to CDE)	1 day	Wed 10/9/13	Wed 10/9/13	PMT,CDE,CO Districts
210	Training posted to PA	2 days	Tue 9/10/13	Wed 9/11/13	PMT
211	CoAlt PearsonAccess Training: CoAlt Examiner Score Entry	50 days	Thu 8/1/13	Thu 10/10/13	

ID	Task Name	Duration	Start	Finish	Resource Names
	CO Summative and Alternate Schedule - FY2014				
212	Draft invite	1 day	Thu 8/1/13	Thu 8/1/13	PMT
213	CDE review/approval of invite	4 days	Fri 8/2/13	Wed 8/7/13	CDE
214	Send invite (2 wks prior to training)	1 day	Tue 8/27/13	Tue 8/27/13	PMT
215	Draft training presentation materials (DS)	5 days	Thu 8/1/13	Wed 8/7/13	PMT
216	CDE review of training presentation materials(dry run takes place during this time)	8 days	Thu 8/8/13	Mon 8/19/13	CDE
217	Finalize materials	5 days	Tue 8/20/13	Mon 8/26/13	PMT
218	CDE approves materials	3 days	Tue 8/27/13	Thu 8/29/13	CDE
219	1st Training held by PMT (sent list of attendees to CDE)	2 days	Mon 9/9/13	Tue 9/10/13	PMT,CDE,CO Districts
220	2nd training held by PMT (sent list of attendees to CDE)	1 day	Thu 10/10/13	Thu 10/10/13	PMT,CDE,CO Districts
221	Training posted to PA	2 days	Wed 9/11/13	Thu 9/12/13	PMT
222	**CoAlt DAC and SAC PearsonAccess Training: Scorer Entry Overview and Session/Test Assignment Management**	**52 days**	**Thu 8/1/13**	**Tue 10/15/13**	
223	Draft invite	1 day	Thu 8/1/13	Thu 8/1/13	PMT
224	CDE review/approval of invite	4 days	Fri 8/2/13	Wed 8/7/13	CDE
225	Send invite (2 wks prior to training)	1 day	Tue 8/27/13	Tue 8/27/13	PMT
226	Draft training presentation materials (DS)	5 days	Thu 8/1/13	Wed 8/7/13	PMT
227	CDE review of training presentation materials(dry run takes place during this time)	8 days	Thu 8/8/13	Mon 8/19/13	CDE
228	Finalize materials	5 days	Tue 8/20/13	Mon 8/26/13	PMT
229	CDE approves materials	3 days	Tue 8/27/13	Thu 8/29/13	CDE
230	1st Training held by PMT (sent list of attendees to CDE)	2 days	Tue 9/10/13	Wed 9/11/13	PMT,CDE,CO Districts
231	2nd training held by PMT (sent list of attendees to CDE)	1 day	Tue 10/15/13	Tue 10/15/13	PMT,CDE,CO Districts
232	Training posted to PA	2 days	Thu 9/12/13	Fri 9/13/13	PMT
233	**Summative PearsonAccess Training: Immediately Before and During Testing**	**52 days**	**Thu 8/1/13**	**Tue 10/15/13**	
234	Draft invite	1 day	Thu 8/1/13	Thu 8/1/13	PMT
235	CDE review/approval of invite	4 days	Fri 8/2/13	Wed 8/7/13	CDE
236	Send invite (2 wks prior to training)	1 day	Tue 8/27/13	Tue 8/27/13	PMT
237	Draft training presentation materials (DJE)	5 days	Thu 8/1/13	Wed 8/7/13	PMT
238	CDE review of training presentation materials(dry run takes place during this time)	8 days	Thu 8/8/13	Mon 8/19/13	CDE
239	Finalize materials	5 days	Tue 8/20/13	Mon 8/26/13	PMT
240	CDE approves materials	3 days	Tue 8/27/13	Thu 8/29/13	CDE
241	1st Training held by PMT (sent list of attendees to CDE)	2 days	Wed 9/11/13	Thu 9/12/13	PMT,CDE,CO Districts
242	2nd training held by PMT (sent list of attendees to CDE)	1 day	Tue 10/15/13	Tue 10/15/13	PMT,CDE,CO Districts
243	Training posted to PA	2 days	Fri 9/13/13	Mon 9/16/13	PMT
244	**Online Readiness**	**74 days**	**Fri 7/12/13**	**Fri 10/25/13**	
245	Online Readiness ES/MS	45 days	Fri 7/12/13	Fri 9/13/13	
246	FT Districts/Schools Identification	13 days	Fri 7/12/13	Tue 7/30/13	
247	CDE Contacts & Confirms Participation (Rolling Wave)	11 days	Fri 7/12/13	Fri 7/26/13	CDE
248	CDE Final Confirmation of Districts/Schools Participation	2 days	Mon 7/29/13	Tue 7/30/13	CDE
249	Training	14 days	Mon 7/29/13	Thu 8/15/13	
250	CDE Review of Training Material	5 days	Mon 7/29/13	Fri 8/2/13	CDE
251	Conduct On-Site Training / Denver	1 day	Tue 8/6/13	Tue 8/6/13	Jeff,CDE
252	Conduct WebEx Training	7 days	Wed 8/7/13	Thu 8/15/13	Jeff,CDE
253	Site Visits	40 days	Fri 7/12/13	Fri 9/6/13	
254	Schedule & Confirm Site Visits (Linked to Rolling Wave)	26 days	Fri 7/12/13	Fri 8/16/13	Jeff
255	Conduct Site Visits	34 days	Mon 7/22/13	Fri 9/6/13	Jeff,CDE
256	Pre-Admin Checklist Completed	10 days	Fri 8/30/13	Fri 9/13/13	Jeff
257	Online Readiness HS	74 days	Fri 7/12/13	Fri 10/25/13	
258	FT Districts/Schools Identification	23 days	Fri 7/12/13	Tue 8/13/13	
259	CDE Contacts & Confirms Participation (Rolling Wave)	21 days	Fri 7/12/13	Fri 8/9/13	CDE
260	CDE Final Confirmation of Districts/Schools Participation	2 days	Mon 8/12/13	Tue 8/13/13	CDE
261	Training	12 days	Mon 8/12/13	Tue 8/27/13	
262	CDE Review of Training Material	5 days	Mon 8/12/13	Fri 8/16/13	CDE
263	Conduct On-Site Training / Denver	1 day	Tue 8/20/13	Tue 8/20/13	Jeff,CDE
264	Conduct WebEx Training	5 days	Wed 8/21/13	Tue 8/27/13	Jeff,CDE

	CO Summative and Alternate Schedule - FY2014				
ID	Task Name	Duration	Start	Finish	Resource Names
265	Site Visits	48 days	Mon 8/12/13	Fri 10/18/13	
266	Schedule & Confirm Site Visits (Linked to Rolling Wave)	10 days	Mon 8/12/13	Fri 8/23/13	Jeff
267	Conduct Site Visits	43 days	Mon 8/19/13	Fri 10/18/13	Jeff,CDE
268	Pre-Admin Checklist Completed	10 days	Fri 10/11/13	Fri 10/25/13	Jeff
269	**3.0 ITEM DEVELOPMENT**	**33 days**	**Tue 7/9/13**	**Thu 8/22/13**	
270	3.1 Summative - ES/MS	15 days	Tue 7/9/13	Mon 7/29/13	
271	ETS certifies forms and posts approved previewer pdf to Pearson PMT	3 days	Tue 7/9/13	Thu 7/11/13	ETS
272	ETS delivers Form Planner, AnIML, Art, etc. to Pearson	1 day	Fri 7/12/13	Fri 7/12/13	ETS
273	Grade 8 Science Late Handoff (7/22)	1 day	Mon 7/22/13	Mon 7/22/13	
274	<u>**CM5 Hand off of items to TMRS**</u>	<u>**1 day**</u>	<u>**Mon 7/22/13**</u>	<u>**Mon 7/22/13**</u>	**Stoplight**
275	ePAT/Practice tests	2 days	Fri 7/26/13	Mon 7/29/13	
276	SS: ETS handoff of all ePAT forms, anIML, and form planner to Pearson (HARD CODE BASED ON ANNA'S SCHEDULE) ETS also provides old XML	1 day	Mon 7/29/13	Mon 7/29/13	ETS
277	Sci: ETS handoff of all ePAT forms, anIML, and form planner to Pearson (HARD CODE BASED ON ANNA'S SCHEDULE) ETS also provides old XML	1 day	Fri 7/26/13	Fri 7/26/13	ETS
278	3.2 Summative - HS	19 days	Mon 7/29/13	Thu 8/22/13	
279	ETS certifies forms and posts approved previewer pdf to Pearson PMT	3 days	Tue 8/20/13	Thu 8/22/13	ETS
280	ETS delivers Form Planner, AnIML, Art, etc. to Pearson	0 days	Thu 8/22/13	Thu 8/22/13	ETS
281	<u>**CM5 Hand off of items to TMRS**</u>	<u>**0 days**</u>	<u>**Thu 8/22/13**</u>	<u>**Thu 8/22/13**</u>	**Stoplight**
282	ePAT/Practice Tests	1 day	Mon 7/29/13	Mon 7/29/13	
283	ETS handoff of all ePAT forms, anIML, and form planner to Pearson (HARD CODE BASED ON ANNA'S SCHEDULE) ETS also provides old XML	1 day	Mon 7/29/13	Mon 7/29/13	ETS
284	**4.0 TEST CONSTRUCTION**	**58 days**	**Fri 7/12/13**	**Wed 10/2/13**	
285	4.1 Summative - ES/MS (12 forms)	20 days	Fri 7/12/13	Thu 8/8/13	
286	Test Maps (7/11 Handoff)	7 days	Fri 7/12/13	Mon 7/22/13	
287	PT delivers Customer Test Maps (adds direction lines) to SPS	0 days	Fri 7/12/13	Fri 7/12/13	PMT
288	Online Form Setting Documents (from DCP-David's group) to System Product Support	0 days	Fri 7/12/13	Fri 7/12/13	DCP
289	System Product Support (Jason) processes CTM to create Pearson Test Maps	4 days	Mon 7/15/13	Thu 7/18/13	SPS
290	SPS creates Test Defines (in xml) and provides to DCP	2 days	Fri 7/19/13	Mon 7/22/13	SPS
291	SPS creates PSC Test Maps (excel spreadsheet)--this is what is being used for the OFS spreadsheet/ePEN setup	0 days	Mon 7/22/13	Mon 7/22/13	SPS
292	SPS updates PTM with scoring information and performs QC check	0 days	Mon 7/22/13	Mon 7/22/13	SPS
293	Additional QC step (comparing item level xml to customer test map)	0 days	Mon 7/22/13	Mon 7/22/13	SPS
294	Test Maps (7/22 Science LATE Handoff)	13 days	Tue 7/23/13	Thu 8/8/13	
295	PT delivers Customer Test Maps (adds direction lines) to SPS	0 days	Tue 7/23/13	Tue 7/23/13	PMT
296	Online Form Setting Documents (from DCP-David's group) to System Product Support	0 days	Tue 7/23/13	Tue 7/23/13	DCP
297	System Product Support (Brandon Harvey) processes draft test maps to create Pearson Test Maps	2 days	Tue 7/23/13	Wed 7/24/13	SPS
298	SPS creates Test Defines (in xml) and provides to DCP	0 days	Wed 7/24/13	Wed 7/24/13	SPS
299	SPS creates PSC Test Maps (excel spreadsheet)--this is what is being used for the OFS spreadsheet/ePEN setup	0 days	Wed 7/24/13	Wed 7/24/13	SPS
300	SPS updates PTM with scoring information and performs QC check	0 days	Thu 8/8/13	Thu 8/8/13	SPS
301	Additional QC step (comparing item level xml to customer test map)	0 days	Thu 8/8/13	Thu 8/8/13	SPS
302	<u>**CM7: Test Maps Baselined (this is the final Pearson test map needed for scoring)**</u>	<u>**0 days**</u>	<u>**Tue 8/6/13**</u>	<u>**Tue 8/6/13**</u>	**EPEN AV,CSS**
303	ePAT Test Maps	6 days	Tue 7/30/13	Tue 8/6/13	
304	PT delivers Customer Test Maps (adds direction lines) to SPS	1 day	Tue 7/30/13	Tue 7/30/13	PMT
305	Online Form Setting Documents (from DCP-David's group) to System Product Support	1 day	Tue 7/30/13	Tue 7/30/13	DCP
306	System Product Support (Brandon Harvey) processes draft test maps to create Pearson Test Maps	3 days	Wed 7/31/13	Fri 8/2/13	SPS
307	SPS creates Test Defines (in xml) and provides to DCP	2 days	Mon 8/5/13	Tue 8/6/13	SPS
308	SPS creates Test Maps for key review for TEIs (excel spreadsheet)	0 days	Tue 8/6/13	Tue 8/6/13	SPS
309	CSS gets files they need for key reivew	0 days	Tue 8/6/13	Tue 8/6/13	CSC
310	4.2 Summative - HS (10 forms)	46 days	Tue 7/30/13	Wed 10/2/13	
311	Test Maps	30 days	Wed 8/21/13	Wed 10/2/13	
312	PT delivers Customer Test Maps (adds direction lines) to SPS	0 days	Thu 8/22/13	Thu 8/22/13	PMT
313	Online Form Setting Documents (from DCP-David's group) to SPS	1 day	Wed 8/21/13	Thu 8/22/13	DCP
314	System Product Support (Brandon Harvey) processes draft test maps to create Pearson Test Maps	3 days	Thu 8/22/13	Mon 8/26/13	SPS
315	SPS creates Test Defines (in xml) and provides to DCP	2 days	Tue 8/27/13	Wed 8/28/13	SPS
316	SPS creates PSC Test Maps (excel spreadsheet)	0 days	Wed 8/28/13	Wed 8/28/13	SPS
317	SPS updates PTM with scoring information and performs QC check	0 days	Mon 9/23/13	Mon 9/23/13	SPS

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
318	Additional QC step (comparing item level xml to customer test map)	0 days	Mon 9/23/13	Mon 9/23/13	SPS
319	**CM7: Test Maps Baselined**	**0 days**	**Wed 10/2/13**	**Wed 10/2/13**	**EPEN AV,CSS**
320	ePAT Test Maps	6 days	Tue 7/30/13	Tue 8/6/13	
321	PT delivers Customer Test Maps (adds direction lines) to SPS	1 day	Tue 7/30/13	Tue 7/30/13	PMT
322	Online Form Setting Documents (from DCP-David's group) to SPS	1 day	Tue 7/30/13	Tue 7/30/13	DCP
323	System Product Support (Brandon Harvey) processes draft test maps to create Pearson Test Maps	3 days	Wed 7/31/13	Fri 8/2/13	SPS
324	SPS creates Test Defines (in xml) and provides to DCP	2 days	Mon 8/5/13	Tue 8/6/13	SPS
325	SPS creates test maps for key review for TEIs (excel spreadsheet)	0 days	Tue 8/6/13	Tue 8/6/13	SPS
326	CSS gets files they need for key reivew (verify with becky)	0 days	Tue 8/6/13	Tue 8/6/13	CSC
327	5.0 FORMS COMPOSITION/PUBLISHING	59.5 days	Fri 7/19/13	Fri 10/11/13	
328	5.1 Online Form Development- ES/MS	36 days	Fri 7/19/13	Mon 9/9/13	
329	Online Forms (7/11 Handoff)	28.5 days	Fri 7/19/13	Wed 8/28/13	
330	CSS does scoring verification of TEIs in previewer (this is parallel to test def)	3 days	Fri 7/19/13	Tue 7/23/13	CSS-Becky/JJ
331	DCP publishes form to 7.5 QC Environment	4 days	Tue 7/23/13	Fri 7/26/13	DCP
332	Validation of Forms extract	3 days	Fri 7/26/13	Tue 7/30/13	SPS
333	Forms QA process	4 days	Fri 7/26/13	Wed 7/31/13	Forms QA
334	PMT Review - ALL	2 days	Fri 7/26/13	Mon 7/29/13	PMT
335	To CDE	0 days	Wed 7/31/13	Wed 7/31/13	CDE
336	CDE reviews online form in 7.5 QC Environment	5 days	Tue 7/30/13	Mon 8/5/13	CDE
337	CDE approves online form in 7.5 QC Environment	0 days	Mon 8/5/13	Mon 8/5/13	CDE
338	ETS reviews and approves online form in 7.5 QC Environment	5 days	Tue 7/30/13	Mon 8/5/13	ETS
339	AIQ (Forms QC) Testing in 7.5 QC Environment	3 days	Tue 8/6/13	Thu 8/8/13	QC Forms
340	CSS Key Review	7 days	Mon 7/29/13	Tue 8/6/13	CSS
341	DCP posts zip file to AV/AIQ/TMT/SPS	0 days	Thu 8/8/13	Thu 8/8/13	DCP
342	Forms published in 7.5 Production (pred to proctor caching)	1 day	Mon 8/26/13	Tue 8/27/13	DCP
343	Publishing provides Forms extract to SPS	1 day	Tue 8/27/13	Wed 8/28/13	DCP
344	Online Forms (7/22 Science LATE Handoff)	26.5 days	Tue 7/23/13	Wed 8/28/13	
345	CSS does scoring verification of TEIs in previewer (this is parallel to test def)	3 days	Tue 7/23/13	Thu 7/25/13	CSS-Becky/JJ
346	DCP publishes form to 7.5 QC Environment	1 day	Thu 7/25/13	Thu 7/25/13	DCP
347	Validation of Forms extract	2 days	Fri 7/26/13	Mon 7/29/13	SPS
348	Forms QA process	5 days	Fri 7/26/13	Thu 8/1/13	Forms QA
349	PMT Review - ALL	2 days	Fri 7/26/13	Mon 7/29/13	PMT
350	To CDE	0 days	Mon 7/29/13	Mon 7/29/13	CDE
351	CDE reviews online form in 7.5 QC Environment	5 days	Tue 7/30/13	Mon 8/5/13	CDE
352	CDE approves online form in 7.5 QC Environment	0 days	Mon 8/5/13	Mon 8/5/13	CDE
353	ETS reviews and approves online form in 7.5 QC Environment	5 days	Tue 7/30/13	Mon 8/5/13	ETS
354	AIQ (Forms QC) Testing in 7.5 QC Environment	3 days	Tue 8/6/13	Thu 8/8/13	QC Forms
355	CSS Key Review	7 days	Fri 7/26/13	Mon 8/5/13	CSS
356	DCP posts zip file to AV/AIQ/TMT/SPS	0 days	Thu 8/8/13	Thu 8/8/13	DCP
357	Forms published in 7.5 Production (pred to proctor caching)	1 day	Mon 8/26/13	Tue 8/27/13	DCP
358	Publishing provides Forms extract to SPS	1 day	Tue 8/27/13	Wed 8/28/13	DCP
359	CDE TestNav UAT--functionality of TestNav	10 days	Thu 8/1/13	Wed 8/14/13	
360	CDE TestNav UAT--functionality of TestNav	10 days	Thu 8/1/13	Wed 8/14/13	CDE
361	ePATs/Practice Tests	30 days	Mon 7/29/13	Mon 9/9/13	
362	ePAT-Science and SS	30 days	Mon 7/29/13	Mon 9/9/13	
363	CSS does scoring verification (this is parallel to test def)	5 days	Mon 7/29/13	Fri 8/2/13	CSS-Becky/JJ
364	ePATs published in QC	5 days	Wed 8/7/13	Tue 8/13/13	DCP
365	Forms QA process	1 day	Wed 8/14/13	Wed 8/14/13	Forms QA
366	Pearson/ETS/CDE simultaneous review -- Would need no edits to items during this phase.	5 days	Thu 8/15/13	Wed 8/21/13	Pearson,ETS,CDE
367	CDE final approval to Pearson	0 days	Wed 8/21/13	Wed 8/21/13	CDE
368	Create forms extract and send to SPS	1 day	Thu 8/22/13	Thu 8/22/13	DCP
369	key review	2 days	Fri 8/23/13	Mon 8/26/13	CSS
370	Published ePATs (9/3)--posting URLs to PA	5 days	Tue 8/27/13	Tue 9/3/13	PMT

		CO Summative and Alternate Schedule - FY2014			
ID	Task Name	Duration	Start	Finish	Resource Names
371	3-way check of ePATS against scoring guides --for posting by 9/3 (THIS WILL BE MOVED TO THE EPAT SCORING GUIDE SECTION)	3 days	Wed 8/14/13	Fri 8/16/13	Manuals/CSS/PMT
372	Publish practice test to training environment as a non-ePAT	4 days	Wed 9/4/13	Mon 9/9/13	
373	publish to QC	1 day	Wed 9/4/13	Wed 9/4/13	DCP
374	Forms QC process (approve in TestNav Publisher)	1 day	Thu 9/5/13	Thu 9/5/13	QC Forms
375	Publish to training production site	1 day	Fri 9/6/13	Fri 9/6/13	DCP
376	PMT tasks with setting up TAM	1 day	Mon 9/9/13	Mon 9/9/13	PMT
377	5.2 Online Form Development- HS	53.5 days	Mon 7/29/13	Fri 10/11/13	
378	Online Form	32.5 days	Tue 8/27/13	Fri 10/11/13	
379	CSS does scoring verification of TEIs in previewer (this is parallel to test def)	3 days	Tue 8/27/13	Thu 8/29/13	CSS-Becky/JJ
380	DCP publishes form to 7.5 QC Environment	4 days	Fri 8/30/13	Thu 9/5/13	DCP
381	Validation of Forms extract	2 days	Fri 9/6/13	Mon 9/9/13	SPS
382	Forms QA process	3 days	Tue 9/10/13	Thu 9/12/13	Forms QA
383	PMT Review	2 days	Tue 9/10/13	Wed 9/11/13	PMT
384	CDE reviews and approves online form in 7.5 QC Environment	5 days	Thu 9/12/13	Wed 9/18/13	CDE
385	ETS reviews and approves online form in 7.5 QC Environment	5 days	Thu 9/12/13	Wed 9/18/13	ETS
386	CDE TestNav UAT--functionality of TestNav	10 days	Fri 9/13/13	Thu 9/26/13	CDE
387	AIQ (Forms QC) Testing in 7.5 QC Environment	3 days	Thu 9/19/13	Mon 9/23/13	QC Forms
388	CSS Key Review	7 days	Tue 9/24/13	Wed 10/2/13	CSS
389	DCP posts zip file to AV/AIQ/TMT/SPS	0 days	Mon 9/23/13	Mon 9/23/13	DCP
390	Forms published in 7.5 Production (pred to proctor caching)	1 day	Wed 10/9/13	Thu 10/10/13	DCP
391	Publishing provides Forms extract to SPS	1 day	Thu 10/10/13	Fri 10/11/13	DCP
392	ePATs/Practice Tests	30 days	Mon 7/29/13	Mon 9/9/13	
393	ePAT-Science and SS	30 days	Mon 7/29/13	Mon 9/9/13	
394	CSS does scoring verification (this is parallel to test def)	5 days	Mon 7/29/13	Fri 8/2/13	CSS-Becky/JJ
395	ePATs published in QC	5 days	Wed 8/7/13	Tue 8/13/13	DCP
396	Forms QA process	1 day	Wed 8/14/13	Wed 8/14/13	Forms QA
397	Pearson/ETS/CDE simultaneous review	5 days	Thu 8/15/13	Wed 8/21/13	Pearson,ETS,CDE
398	CDE final approval to Pearson	0 days	Wed 8/21/13	Wed 8/21/13	CDE
399	Create forms extract and send to SPS	1 day	Thu 8/22/13	Thu 8/22/13	DCP
400	key review	2 days	Fri 8/23/13	Mon 8/26/13	CSS
401	Published ePATs (9/3)--posting URL to PA	5 days	Tue 8/27/13	Tue 9/3/13	PMT
402	3-way check of ePATS against scoring guides --for posting by 9/1 (THIS WILL BE MOVED TO THE EPAT SCORING GUIDE SECTION)	3 days	Wed 8/14/13	Fri 8/16/13	Manuals/CSS/PMT
403	Publish practice test to training environment as a non-ePAT	4 days	Wed 9/4/13	Mon 9/9/13	
404	publish to QC	1 day	Wed 9/4/13	Wed 9/4/13	DCP
405	Forms QC process (approve in TestNav Publisher)	1 day	Thu 9/5/13	Thu 9/5/13	Forms QC
406	Publish to training production site	1 day	Fri 9/6/13	Fri 9/6/13	DCP
407	PMT tasks with setting up TAM	1 day	Mon 9/9/13	Mon 9/9/13	PMT
408	5.3 Test Admin Management (TAM) Request Form - Prod and Training - ES/MS AND HS	7 days	Fri 8/16/13	Mon 8/26/13	
409	Operational	7 days	Fri 8/16/13	Mon 8/26/13	
410	Build high level Test Administration Management - Live site	1 day	Fri 8/16/13	Fri 8/16/13	PMT-Dave
411	Create & Review Live TAM Request form	1 day	Mon 8/19/13	Mon 8/19/13	PMT-Dave
412	Manage Test Session beginning date in Config Doc	1 day	Tue 8/20/13	Tue 8/20/13	PMT-Dave
413	Update TAM, System Status Check, & MTC Settings in TAM	1 day	Wed 8/21/13	Wed 8/21/13	PMT-Dave
414	Publish online forms to Prod - in name only	1 day	Fri 8/23/13	Fri 8/23/13	PMT-Dave
415	Add custom TestNav schedule for subjects	1 day	Mon 8/26/13	Mon 8/26/13	PMT-Dave
416	6.0 PEARSONACCESS ONLINE DESIGN AND SETUP	146 days	Mon 4/29/13	Fri 11/22/13	
417	PA Release 7.0	146 days	Mon 4/29/13	Fri 11/22/13	
418	Request Deadline - Alt and Summ	1 day	Mon 4/29/13	Mon 4/29/13	ITPM,PIM
419	Create Org File Layout - Alt and Summ	25 days	Tue 4/30/13	Tue 6/4/13	BA
420	Create SDU File Layout - Alt and Summ	25 days	Tue 4/30/13	Tue 6/4/13	BA
421	Develop and Review Config Documents - Alt and Summ	5 days	Mon 4/29/13	Fri 5/3/13	PIM,ALL
422	Config Documents Baselined (Solution Design Baselined) - Alt and Summ	0 days	Fri 5/3/13	Fri 5/3/13	PIM
423	CM 4: PearsonAccess Requirements Baselined - Alt and Summ	0 days	Fri 5/3/13	Fri 5/3/13	Stoplight

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
424	CoAlt Development: PearsonAccess Score Entry System (EASE)	78 days	Fri 5/3/13	Fri 8/23/13	
425	EASE Customer Requirements Questionnaire (CRQ) Baselined (5/3!!)	0 days	Fri 5/3/13	Fri 5/3/13	EASE
426	test layout provided to EASE	2 days	Mon 6/3/13	Tue 6/4/13	PMT
427	Initial test maps start flowing to IT	0 days	Mon 5/13/13	Mon 5/13/13	PRS,TMT
428	All initial test maps handed off to IT	0 days	Tue 7/2/13	Tue 7/2/13	TMT
429	Develop Score Entry System	22 days	Wed 6/5/13	Fri 7/5/13	EASE,ITPM
430	AV Testing of Score Entry System	10 days	Tue 7/16/13	Mon 7/29/13	AV
431	AV Sign Off Score Entry System	0 days	Mon 7/29/13	Mon 7/29/13	AV
432	AIQ Testing of Score Entry System (key entry of test data)	5 days	Mon 8/12/13	Fri 8/16/13	AIQ
433	AIQ Sign off of Score Entry System Complete (key entry of test data complete)	0 days	Fri 8/16/13	Fri 8/16/13	AIQ
434	Customer Acceptance Testing (CAT Window) (8/2-8/16)	11 days	Fri 8/2/13	Fri 8/16/13	PMT,CDE
435	Move Score Entry System to Production (8/23)	0 days	Fri 8/23/13	Fri 8/23/13	EASE,ITPM
436	Org Transforms - Summative and Alt	61 days	Mon 5/6/13	Wed 7/31/13	
437	Develop ORG Transform	43 days	Mon 5/6/13	Fri 7/5/13	Stat Group
438	AV Test ORG Transforms	10 days	Tue 7/16/13	Mon 7/29/13	AV
439	AIQ test ORG Transforms	2 days	Tue 7/30/13	Wed 7/31/13	AIQ
440	Org Extract Transforms - Summative and Alt	59 days	Mon 5/6/13	Mon 7/29/13	
441	Develop ORG Extract Transform	43 days	Mon 5/6/13	Fri 7/5/13	Stat Group
442	AV Test ORG Extract Transforms	10 days	Tue 7/16/13	Mon 7/29/13	AV
443	SDU Transforms - Summative and Alt	61 days	Mon 5/6/13	Wed 7/31/13	
444	Develop SDU Transform	43 days	Mon 5/6/13	Fri 7/5/13	Stat Group
445	AV Test SDU Transform	10 days	Tue 7/16/13	Mon 7/29/13	AV
446	AIQ test transform	2 days	Tue 7/30/13	Wed 7/31/13	AIQ
447	RSDU Transforms - Summative and Alt	61 days	Mon 5/6/13	Wed 7/31/13	
448	Develop RSDU Transform	43 days	Mon 5/6/13	Fri 7/5/13	Stat Group
449	AV Test RSDU Transform	10 days	Tue 7/16/13	Mon 7/29/13	AV
450	AIQ test transform	2 days	Tue 7/30/13	Wed 7/31/13	AIQ
451	SORM to ARMS CAWA - CoAlt	1 day	Fri 7/5/13	Fri 7/5/13	
452	Organization Load	1 day	Fri 7/5/13	Fri 7/5/13	Technologist
453	Student Load	1 day	Fri 7/5/13	Fri 7/5/13	Technologist
454	Publish Student Results	1 day	Fri 7/5/13	Fri 7/5/13	Technologist
455	Aggregation	1 day	Fri 7/5/13	Fri 7/5/13	Technologist
456	Re-Aggregation	1 day	Fri 7/5/13	Fri 7/5/13	Technologist
457	Set Values	1 day	Fri 7/5/13	Fri 7/5/13	Technologist
458	CAWA to push data from SORM to ARMS - Summ ES/MS & HS	1 day	Fri 7/5/13	Fri 7/5/13	
459	Organization Load	1 day	Fri 7/5/13	Fri 7/5/13	Technologist
460	Student Load	1 day	Fri 7/5/13	Fri 7/5/13	Technologist
461	Publish Student Results	1 day	Fri 7/5/13	Fri 7/5/13	Technologist
462	Aggregation	1 day	Fri 7/5/13	Fri 7/5/13	Technologist
463	Re-Aggregation	1 day	Fri 7/5/13	Fri 7/5/13	Technologist
464	Set Values	1 day	Fri 7/5/13	Fri 7/5/13	Technologist
465	Code Freeze for MTS2	0 days	Fri 7/5/13	Fri 7/5/13	IT
466	Development Work Complete (7/5 for fall)	0 days	Fri 7/5/13	Fri 7/5/13	
467	No Score Logic Development (Summ ES/MS & HS)	5 days	Mon 7/15/13	Fri 7/19/13	Technologist
468	AV testing PA	11 days	Mon 7/15/13	Mon 7/29/13	AV
469	Move all Transforms to Production for PA 7.0 go live	0 days	Fri 8/23/13	Fri 8/23/13	Stat Group
470	PearsonAccess Go Live	0 days	Fri 8/23/13	Fri 8/23/13	ITPM
471	**CM9: PearsonAccess "Go Live" Date (Portal)**	**0 days**	**Fri 8/23/13**	**Fri 8/23/13**	**ITPM**
472	Set timing of execution of CAWA-No Score Logic (Summ ES/MS & HS)	1 day	Mon 8/26/13	Mon 8/26/13	Technologist
473	Set timing of execution of CAWA for Tier 1 SORM to ARMS (Alt HS)	1 day	Mon 8/26/13	Mon 8/26/13	Technologist
474	Set timing of execution of CAWA for Tier 1 SORM to ARMS (Summ ES/MS & HS)	1 day	Mon 8/26/13	Mon 8/26/13	Technologist
475	PearsonAccess Go Live to CDE	0 days	Tue 9/3/13	Tue 9/3/13	ITPM,CDE,CO Districts
476	Production Processing for PearsonAccess	68 days	Mon 8/19/13	Fri 11/22/13	

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
477	Receive ORG file from CDE - Summative and Alt	0 days	Mon 8/19/13	Mon 8/19/13	PMT,CDE,CDE-Jessica
478	Preliminary QC of ORG File - Summ and Alt	5 days	Mon 8/19/13	Fri 8/23/13	Technologist
479	Load ORG file and DACs -Summative and Alt	1 day	Mon 8/26/13	Mon 8/26/13	Technologist
480	SDU - Summative	62 days	Tue 8/27/13	Fri 11/22/13	
481	Districts begin uploading SDU files- Summative ES/MS & HS	1 day	Tue 9/3/13	Tue 9/3/13	CDE,CO Districts
482	SDU files from Districts- deadline is 9/30 - Summative ES/MS	20 days	Tue 9/3/13	Mon 9/30/13	DE,CDE-Jessica,CO Districts
483	SDU files from Districts- deadline is 11/22 - Summative HS	58 days	Tue 9/3/13	Fri 11/22/13	DE,CDE-Jessica,CO Districts
484	Load SDU file (ONLY IF NEEDED)	1 day	Tue 8/27/13	Tue 8/27/13	Technologist
485	SDU - Alt	58 days	Tue 9/3/13	Fri 11/22/13	
486	Districts upload SDU files- Alt	58 days	Tue 9/3/13	Fri 11/22/13	CO Districts,CDE
487	SDU files from Districts- deadline for initial orders- ALT	0 days	Fri 9/13/13	Fri 9/13/13	PMT,CDE,CDE-Jessica
488	Load Users (DACs)	1 day	Wed 8/28/13	Wed 8/28/13	PMT
489	**PearsonAccess User Documentation**	**44 days**	**Tue 7/2/13**	**Tue 9/3/13**	
490	Updating PearsonAccess User Documentation	40 days	Tue 7/2/13	Tue 8/27/13	PMT,Tech Writer
491	Verify Sample PearsonAccess User Files do not need to change	3 days	Tue 7/2/13	Fri 7/5/13	PMT-Dani
492	Provide PearsonAccess User Documents to CDE (if needed)	1 day	Wed 8/28/13	Wed 8/28/13	PMT
493	CDE Approve PearsonAccess User Load Documents (if needed)	3 days	Thu 8/29/13	Tue 9/3/13	CDE,CDE-Jessica
494	Post PearsonAccess User Documentation and Sample Files as Resource	0 days	Tue 9/3/13	Tue 9/3/13	PMT
495	**PearsonAccess User Manuals and Online Help - 7.0 Release**	**25 days**	**Fri 7/5/13**	**Thu 8/8/13**	
496	Update PearsonAccess Manuals and compare to test environment	7 days	Fri 7/5/13	Mon 7/15/13	Tech Writer
497	PMT Review PearsonAccess Manuals	4 days	Tue 7/16/13	Fri 7/19/13	PMT
498	/tech writers update	3 days	Mon 7/22/13	Wed 7/24/13	Tech Writer
499	PearsonAccess Manuals - CDE review	2 days	Thu 7/25/13	Fri 7/26/13	CDE
500	Apply CDE Updates to PearsonAccess Manuals (before noon on 1/24)	4 days	Mon 7/29/13	Thu 8/1/13	Tech Writer
501	Post PearsonAccess Manuals as Resource (need emergency team track)	5 days	Fri 8/2/13	Thu 8/8/13	PMT
502	**FAQ - Updates**	**1 day**	**Mon 7/22/13**	**Mon 7/22/13**	**Tech Writers**
503	**7.0 MATERIALS PRODUCTION**	**53 days**	**Tue 7/2/13**	**Mon 9/16/13**	
504	**CM 6: Files to Print/Publish Complete**	**0 days**	**Thu 9/5/13**	**Thu 9/5/13**	**Stoplight**
505	Non-scannable printer proofs approved	0 days	Thu 9/5/13	Thu 9/5/13	Stoplight
506	Purchase Requisitions Initiated	0 days	Thu 9/5/13	Thu 9/5/13	
507	All Requisitions Released to Procurement	0 days	Thu 9/5/13	Thu 9/5/13	
508	All Orders Placed with Supplier	0 days	Thu 9/5/13	Thu 9/5/13	
509	**Print Coordinators' Manual**	**7 days**	**Thu 9/5/13**	**Mon 9/16/13**	
510	Manual to Print Vendor	0 days	Thu 9/5/13	Thu 9/5/13	PMT,Design,Procurement
511	Digital produced and proofed	1 day	Fri 9/6/13	Fri 9/6/13	Design
512	Digital proof approval	1 day	Mon 9/9/13	Mon 9/9/13	Proofreading,PMT
513	Completes Printing	4 days	Tue 9/10/13	Fri 9/13/13	Vendor
514	Samples Received	0 days	Fri 9/13/13	Fri 9/13/13	Vendor
515	Manual Delivered for Packaging Effort	1 day	Mon 9/16/13	Mon 9/16/13	Vendor
516	**Print Examiner's Manual**	**7 days**	**Tue 9/3/13**	**Thu 9/12/13**	
517	Manual to Print Vendor	0 days	Tue 9/3/13	Tue 9/3/13	PMT,Design,Procurement
518	Digital produced and proofed	1 day	Wed 9/4/13	Wed 9/4/13	Design
519	Digital proof approval	1 day	Thu 9/5/13	Thu 9/5/13	Proofreading,PMT
520	Completes Printing	4 days	Fri 9/6/13	Wed 9/11/13	Vendor
521	Samples Received	0 days	Wed 9/11/13	Wed 9/11/13	Vendor
522	Manual Delivered for Packaging Effort	1 day	Thu 9/12/13	Thu 9/12/13	Vendor
523	Print Certification Form (copy center)	5 days	Fri 8/9/13	Thu 8/15/13	PMT-Coordinator
524	Print Memo for CoAlt Test Materials (copy center)	1 day	Tue 7/2/13	Tue 7/2/13	PMT-Coordinator
525	**8.0 PACKAGING AND DISTRIBUTION**	**100 days**	**Wed 5/29/13**	**Mon 10/21/13**	
526	CoAlt	92 days	Wed 5/29/13	Mon 10/7/13	
527	**All materials received from vendor**	**0 days**	**Tue 7/2/13**	**Tue 7/2/13**	
528	Oracle P&D	88 days	Wed 5/29/13	Tue 10/1/13	
529	Develop Project Specifications Form	30 days	Wed 5/29/13	Wed 7/10/13	PMT,PC

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
530	Notify the Team Project Spec Form Ready For Review	0 days	Wed 7/10/13	Wed 7/10/13	PC
531	Project Parameter Form Set Up	10 days	Thu 7/11/13	Wed 7/24/13	PC,PMT
532	Review Process for Project Spec Form	10 days	Thu 7/11/13	Wed 7/24/13	PC,TR,PDD,PKG,PMT
533	Update Project Specification Form with Transportation Fields	1 day	Thu 7/11/13	Thu 7/11/13	PMT
534	Create T-Planning requirements Documentation	2 days	Fri 7/12/13	Mon 7/15/13	PMT
535	T-Planning Requirements Form Review	2 days	Tue 7/16/13	Wed 7/17/13	TR
536	Project Specification Form (PSF) Baselined	0 days	Wed 7/24/13	Wed 7/24/13	PDD,PC,TR,PMT,PKG
537	Create Pre-Sales Order (PSO) File Definition & Rules Document	5 days	Thu 7/25/13	Wed 7/31/13	PMT
538	Update Pre Sales Order (PSO) File Definitial & rules doc - baseline	5 days	Thu 8/1/13	Wed 8/7/13	PDD
539	Create barcode spreadsheet	2 days	Thu 7/25/13	Fri 7/26/13	PC-Bruce
540	P&D Development Complete	10 days	Thu 8/1/13	Wed 8/14/13	PDD
541	Enter/QC Oracle Apps data for prod	2 days	Mon 7/29/13	Tue 7/30/13	PC
542	AV System Testing	20 days	Thu 8/15/13	Thu 9/12/13	
543	Testing Enrollments and PSO/Inbound	5 days	Thu 8/15/13	Wed 8/21/13	AV
544	PSO Rules	1 day	Wed 8/28/13	Wed 8/28/13	
545	PSO Rules Validation by the Program team	0.5 days	Wed 8/28/13	Wed 8/28/13	PMT
546	PSO Rules Validation for additional orders	0.5 days	Wed 8/28/13	Wed 8/28/13	PMT
547	AV Signoff PSO Rules (2 of 3)	0 days	Wed 8/28/13	Wed 8/28/13	AV
548	System Test Readiness eMail Approval	0.5 days	Wed 8/28/13	Wed 8/28/13	AV
549	Personalized Materials	7 days	Wed 9/4/13	Thu 9/12/13	
550	AV Validates Personalized Materials	7 days	Wed 9/4/13	Thu 9/12/13	AV
551	AV Signoff of Personalized materials (3 of 3)	0 days	Thu 9/12/13	Thu 9/12/13	AV
552	AV Sign-off of Packaging & Distribution Complete	0 days	Thu 9/12/13	Thu 9/12/13	AV
553	AIQ Acceptance Testing	9 days	Fri 9/13/13	Wed 9/25/13	C,PDD,PKG,Oper,TR,Oracle
554	**CM 8: AIQ Acceptance Test for Packaging and Distribution (P&D) Complete**	**0 days**	**Wed 9/25/13**	**Wed 9/25/13**	**AIQ**
555	Production Processing	3 days	Thu 9/26/13	Mon 9/30/13	
556	Create Production PSO Interface File	1 day	Mon 9/30/13	Mon 9/30/13	PDD
557	Final Oracle APPS PROD QC	1 day	Thu 9/26/13	Thu 9/26/13	PC
558	Production Readiness Review (Blue Dot email)	1 day	Fri 9/27/13	Fri 9/27/13	PT,PC,PDD,PC Oper
559	PSO Materials Packing List (PMPL) Production Data Provided to Program Team	1 day	Fri 9/27/13	Fri 9/27/13	PMT/Prod Control
560	**CM 10: Sales Orders Imported into Oracle Production (Prod Order Import)**	**0 days**	**Mon 9/30/13**	**Mon 9/30/13**	**C,Oper,PDD,TR,AV,Oracle**
561	Transportation Planning Complete	1 day	Tue 10/1/13	Tue 10/1/13	Transportation
562	**Packaging Activities - CoAlt**	**24 days**	**Thu 8/29/13**	**Wed 10/2/13**	
563	Packaging Specs Prepared	0 days	Thu 8/29/13	Thu 8/29/13	PMT
564	Packaging Kick Off Meeting	1 day	Fri 8/30/13	Fri 8/30/13	PMT,PC
565	Create Memo for the field (coordinator kit memo)	5 days	Fri 9/6/13	Thu 9/12/13	PMT
566	Print memo	1 day	Fri 9/13/13	Fri 9/13/13	PMT
567	All materials that will be placed into TB Kit received	0 days	Mon 9/16/13	Mon 9/16/13	PKG
568	All materials that require pre pack received by vendor (!!MUST BE NO LATER THAN 9/27 for manuals!!)	0 days	Fri 9/27/13	Fri 9/27/13	PKG
569	Avery Labels	9 days	Mon 9/16/13	Fri 9/27/13	
570	Blue Dot	0 days	Mon 9/16/13	Mon 9/16/13	PKG,PMT
571	Apply Avery Labels	9 days	Mon 9/16/13	Fri 9/27/13	PKG
572	Pre Pack	21 days	Thu 8/29/13	Fri 9/27/13	
573	Pre-Pack specifications to PKG	0 days	Thu 8/29/13	Thu 8/29/13	PMT
574	**Pre Pack Blue Dot Complete**	**1 day**	**Fri 9/27/13**	**Fri 9/27/13**	**PMT,PKG**
575	Pre-Packaging complete	0 days	Fri 9/27/13	Fri 9/27/13	PKG
576	Final Packaging	24 days	Thu 8/29/13	Wed 10/2/13	
577	Final Specs Due for final packaging	1 day	Thu 8/29/13	Thu 8/29/13	
578	Shipping and Return labels	1 day	Tue 10/1/13	Tue 10/1/13	PC
579	**CM 11: Final Pack Blue Dot Complete**	**1 day**	**Wed 10/2/13**	**Wed 10/2/13**	**PKG**
580	Packaging & Shipping Window Begins	0 days	Wed 10/2/13	Wed 10/2/13	PKG
581	Final Packaging Complete	0 days	Wed 10/2/13	Wed 10/2/13	PKG
582	**CM 12: Test Materials Due to the Customer/Due in District (DID)**	**3 days**	**Thu 10/3/13**	**Mon 10/7/13**	**Stoplight,CDE**

ID	Task Name	Duration	Start	Finish	Resource Names
				CO Summative and Alternate Schedule - FY2014	
583	Summative Proctor's Manuals - ES/MS	10.5 days	Tue 8/27/13	Wed 9/11/13	
584	Print/Prep Materials for Shipping (Manuals and memo as pred.)	1.5 wks	Tue 8/27/13	Fri 9/6/13	PMT-Anna
585	Ship materials (Sept 4 latest)	3 days	Fri 9/6/13	Wed 9/11/13	PMT-Anna
586	DID	0 days	Wed 9/11/13	Wed 9/11/13	PMT-Anna
587	Summative Proctor's Manuals - HS	12 days	Wed 10/2/13	Mon 10/21/13	PMT-Anna
588	Prep Materials for Shipping (Manuals and memo as pred.)	2 wks	Wed 10/2/13	Wed 10/16/13	PMT-Anna
589	Ship materials (by Oct. 16)	3 days	Wed 10/16/13	Fri 10/18/13	PMT-Anna
590	DID	0 days	Mon 10/21/13	Mon 10/21/13	PMT-Anna
591	9.0 MATERIALS PROCESSING - CoAlt	289 days	Thu 10/24/13	Mon 12/8/14	
592	Security Processing	35 days	Thu 10/24/13	Fri 12/13/13	
593	Processing Specs Available	1 day	Thu 10/24/13	Thu 10/24/13	PMT
594	Kick-off Meeting	1 day	Fri 10/25/13	Fri 10/25/13	PMT,PC
595	Test Material Pick Up	25 days	Mon 10/28/13	Tue 12/3/13	Trans
596	Material Receipt	25 days	Thu 10/31/13	Fri 12/6/13	Scanning
597	Security Scanning Blue Dot	1 day	Thu 11/7/13	Thu 11/7/13	PMT,PC
598	Blue Dot Release	1 day	Fri 11/8/13	Fri 11/8/13	PMT,PC
599	Security Scanning Complete	1 day	Mon 12/9/13	Mon 12/9/13	Scanning
600	Security Resolution Complete	4 days	Tue 12/10/13	Fri 12/13/13	Scanning
601	Security Resolution	254 days	Fri 12/13/13	Mon 12/8/14	
602	Nonscorable materials destruction (secure, unused)	2 days	Fri 6/20/14	Mon 6/23/14	PMT,CDE
603	Secure materials destruction (used)	2 days	Fri 12/5/14	Mon 12/8/14	PMT,CDE
604	Secure materials verification--initial report to CDE	0 days	Fri 12/13/13	Fri 12/13/13	PMT,CDE
605	Secure materials verification--weekly reports to CDE	1 day	Mon 12/23/13	Mon 12/23/13	PMT,CDE
606	Secure materials verification--final report to CDE	1 day	Thu 1/2/14	Thu 1/2/14	PMT,CDE
607	10.0 TEST ADMINISTRATION	65 days	Tue 8/27/13	Wed 11/27/13	
608	10.1 Summative ES/MS	24 days	Tue 8/27/13	Mon 9/30/13	
609	CM13: Online Test Available to Customer for Proctor Caching	11 days	Tue 8/27/13	Wed 9/11/13	
610	Review and approve Test Admin Management screen images	1 day	Tue 8/27/13	Tue 8/27/13	PMT-Dave
611	Proctor Caching (no later than 9/11)-- if this changes, follow up with Jeff	1 day	Wed 8/28/13	Wed 8/28/13	CDE,CO Districts
612	DID	0 days	Wed 9/11/13	Wed 9/11/13	
613	CM14: Field Test Administration Window	11 days	Mon 9/16/13	Mon 9/30/13	CDE,CO Districts
614	10.2 Summative HS	62 days	Tue 8/27/13	Fri 11/22/13	
615	CM13: Online Test Available to Customer for proctor caching	37 days	Tue 8/27/13	Fri 10/18/13	
616	Review and approve Test Admin Management screen images	1 day	Tue 8/27/13	Tue 8/27/13	PMT-Dave
617	Proctor Caching (no later than 10/18)-- if this changes, follow up with Jeff	1 day	Thu 10/10/13	Fri 10/11/13	CDE,CO Districts
618	DID	0 days	Fri 10/18/13	Fri 10/18/13	
619	CM14: Field Test Administration Window	20 days	Mon 10/28/13	Fri 11/22/13	CDE,CO Districts
620	10.3 CoAlt HS	63 days	Thu 8/29/13	Wed 11/27/13	
621	CM 14: Test Administration Begins	0 days	Mon 10/21/13	Mon 10/21/13	
622	CoAlt TEST ADMINISTRATION	25 days	Mon 10/21/13	Fri 11/22/13	CDE,CO Districts
623	Material Order/Tracking and Additional Orders - CoAlt	63 days	Thu 8/29/13	Wed 11/27/13	
624	Districts submit SDUs for initial orders of materials (Districts will need to do Aos if submitted after this)	11 days	Thu 8/29/13	Fri 9/13/13	CDE,CO Districts
625	Districts Update Profiles (RSDUs)	49 days	Mon 9/16/13	Fri 11/22/13	CO Districts,CDE
626	ASSESSMENT NETWORK PROFILE UPDATE CLOSES (External/Field)	0 days	Fri 11/22/13	Fri 11/22/13	CO Districts,CDE
627	Additional Orders Window--Secure materials	28 days	Tue 10/8/13	Fri 11/15/13	CO Districts,CDE
628	Additional Orders Window--transportation materials	36 days	Tue 10/8/13	Wed 11/27/13	CO Districts,CDE
629	11.0 SCORING AND REPORTING	191 days	Mon 5/6/13	Thu 2/6/14	
630	11.1 CoAlt Scoring and Reporting	160 days	Fri 5/10/13	Mon 12/30/13	
631	Data File Reporting Development	160 days	Fri 5/10/13	Mon 12/30/13	
632	PERL Extract (Final Student Data File)	39 days	Fri 5/10/13	Fri 7/5/13	
633	Baseline Final Student Data File layout (SAME AS CRQ baseline date)	1 day	Fri 5/10/13	Fri 5/10/13	BA
634	PERL Dev (Final Student Data File)	39 days	Fri 5/10/13	Fri 7/5/13	Reporting Services
635	Final Student Data File coding is complete	0 days	Fri 7/5/13	Fri 7/5/13	Reporting Services

	CO Summative and Alternate Schedule - FY2014				
ID	Task Name	Duration	Start	Finish	Resource Names
636	**Final Student Data File Validation**	**19 days**	**Mon 7/29/13**	**Thu 8/22/13**	
637	AV Testing on Final Student Data File (7/29 AV signs off on scoring system through 8/9)	10 days	Mon 7/29/13	Fri 8/9/13	AV
638	AV sign-offs on Final Student Data File	0 days	Fri 8/9/13	Fri 8/9/13	AV
639	AIQ Testing on Final Student Data File	3 days	Mon 8/19/13	Wed 8/21/13	AIQ
640	AIQ sign-offs on Final Student Data File	1 day	Thu 8/22/13	Thu 8/22/13	AIQ
641	**CM 22: AIQ Acceptance Test for Reporting Complete**	**0 days**	**Thu 8/22/13**	**Thu 8/22/13**	**AIQ**
642	Final Student Data File	88 days	Thu 8/22/13	Mon 12/30/13	
643	Setup and keys loaded complete (this should have a predecessor of TestMaps baselined)	2 days	Thu 8/22/13	Fri 8/23/13	IT/RASE
644	T3 Tool load tables (this should have a predecessor of TestMaps baselined)	1 day	Fri 8/23/13	Fri 8/23/13	IT
645	Alert resolutions in progress (PA/SORM operational Queries)	3 days	Wed 11/27/13	Tue 12/3/13	PMT
646	Monitor Counts between PoTL, SORM, RASE and ARMS	3 days	Wed 11/27/13	Tue 12/3/13	Technologist
647	Scores submitted; testing window closed	1 day	Mon 12/2/13	Mon 12/2/13	ITPM
648	Final Accept Scores for Field Test process run Complete	1 day	Tue 12/3/13	Tue 12/3/13	ITPM
649	**CM 20: All Scoring Complete**	**0 days**	**Tue 12/3/13**	**Tue 12/3/13**	**Stoplight**
650	Extract Scores from EASE (Bus sends data to RASE)	1 day	Tue 12/3/13	Tue 12/3/13	ITPM,EASE
651	RASE sends data to ARMS	1 day	Wed 12/4/13	Wed 12/4/13	RASE/ARMS
652	CA Tech runs PERL/CAWA jobs	1 day	Thu 12/5/13	Thu 12/5/13	CA Techs
653	AIQ approval of production Flat file	2 days	Fri 12/6/13	Mon 12/9/13	AIQ
654	**CM 17: AIQ Acceptance Test for Scoring Complete**	**0 days**	**Thu 8/22/13**	**Thu 8/22/13**	**Stoplight**
655	**CM 21: Student Data File Provided to Psychometric Team**	**1 day**	**Tue 12/10/13**	**Tue 12/10/13**	**ITPM**
656	PRS Sign Off on Final Student Data File	2 days	Mon 12/16/13	Tue 12/17/13	PRS
657	**CM 24: Student Data File Due to Customer (CA Techs posts Final SDF to SFTP site)--No later than 6/7**	**0 days**	**Tue 12/17/13**	**Tue 12/17/13**	**Stoplight**
658	PMT notifies CDE that State Final Student Data File is posted to SFTP	0 days	Tue 12/17/13	Tue 12/17/13	PMT,CDE,CDE-Jessica
659	Official Certification of Final SDF by CDE	8 days	Wed 12/18/13	Mon 12/30/13	CDE,CDE-Jessica
660	11.2 Summatvies - ES/MS	145 days	Mon 5/6/13	Mon 12/2/13	
661	Scoring	130 days	Mon 5/6/13	Thu 11/7/13	
662	ePEN (70 items)	59 days	Fri 7/19/13	Thu 10/10/13	
663	Planning	17 days	Fri 7/19/13	Mon 8/12/13	
664	PSC Program Manager creates 2013 Project Plan	1 day	Tue 7/30/13	Tue 7/30/13	PSC
665	Program Manager approves 2013 Project Plan	3 days	Wed 7/31/13	Fri 8/2/13	PMT-Will
666	**CM15: Create, Review, and Baseline OE Spreadsheet**	**7 days**	**Fri 7/19/13**	**Mon 7/29/13**	**PSC**
667	Review and Baseline ePen CRAD Addendum	1 day	Mon 7/29/13	Mon 7/29/13	ePEN PIM
668	Report sets spreadsheets	1 day	Mon 7/29/13	Mon 7/29/13	PSC
669	All inputs received and baselined	0 days	Mon 7/29/13	Mon 7/29/13	PSC
670	Create and baseline Project Set Up (standard duration is 10 days)	9 days	Tue 7/30/13	Mon 8/12/13	ePEN PIM
671	Submit AT Clip Import Spec for STAGE	1 day	Tue 7/30/13	Tue 7/30/13	ePEN PIM
672	Update TAM in MTS2, QC, Prod with AT Clip Import Spec data	1 day	Wed 7/31/13	Thu 8/1/13	PMT-Dave,Software AIQ
673	Update PearsonAccess Test Admin Config Doc with AT Clip Import Spec data	3 days	Wed 7/31/13	Fri 8/2/13	PA PIM
674	Verify AV has latest version of ePEN available for testing	0 days	Fri 8/2/13	Fri 8/2/13	EPEN DEV
675	ePEN Testing	39 days	Fri 8/9/13	Thu 10/3/13	
676	ePEN AV Testing (standard duration is 20 days)	20 days	Tue 8/13/13	Tue 9/10/13	EPEN AV
677	Publish Online Test in MTS2 (end 8/15)	3 days	Fri 8/9/13	Tue 8/13/13	Software AIQ
678	AV ePen takes Online test in MTS2 environment	2 days	Thu 8/15/13	Fri 8/16/13	EPEN AV
679	Online Test Extract by ePEN from MTS2 for Clip Review	3 days	Mon 8/19/13	Wed 8/21/13	ePEN PIM
680	ePEN AV Clip Review/sign off - Online Only	2 days	Thu 8/22/13	Mon 8/26/13	EPEN AV
681	Submit AT Clip Import Spec for Prod	1 day	Mon 8/26/13	Tue 8/27/13	ePEN PIM
682	AIQ submits TestNav test deck	5 days	Wed 9/11/13	Tue 9/17/13	AIQ
683	AIQ testing and sign of of ePen	7 days	Wed 9/25/13	Thu 10/3/13	AIQ
684	UAT and Prod Setup - ES/MS	22 days	Wed 9/11/13	Thu 10/10/13	
685	extract production online batches	12 days	Tue 9/17/13	Wed 10/2/13	Technologist
686	UAT set up	5 days	Wed 9/11/13	Tue 9/17/13	ePEN PIM
687	PSC UAT (standard durationis 5 days)	5 days	Wed 9/18/13	Tue 9/24/13	PSC
688	Prod set up	5 days	Fri 10/4/13	Thu 10/10/13	ePEN PIM

		CO Summative and Alternate Schedule - FY2014				
ID	Task Name		Duration	Start	Finish	Resource Names
689	ePEN Prod Ready (before scoring can begin)		0 days	Thu 10/10/13	Thu 10/10/13	
690	Scoring (RASE) Development & Testing		111 days	Mon 5/6/13	Thu 10/10/13	
691	Develop Scoring System		43 days	Mon 5/6/13	Fri 7/5/13	RASE
692	AV Testing of Scoring System		10 days	Wed 9/11/13	Tue 9/24/13	AV
693	AV Signoff on Scoring System		0 days	Tue 9/24/13	Tue 9/24/13	AV
694	AIQ Testing of Scoring System (via data file validation)		5 days	Fri 10/4/13	Thu 10/10/13	AIQ
695	AIQ Signoff on Scoring System		0 days	Thu 10/10/13	Thu 10/10/13	AIQ
696	**CM 17: AIQ Acceptance Test for Scoring Complete**		**0 days**	**Thu 10/10/13**	**Thu 10/10/13**	**AIQ**
697	Production - OLT		0 days	Thu 10/10/13	Thu 10/10/13	
698	Load ePEN		0 days	Thu 10/10/13	Thu 10/10/13	Technologist
699	Rangefinding (Anchor Review)		67 days	Mon 7/15/13	Thu 10/17/13	
700	Rangefinding Preparation		59 days	Mon 7/15/13	Fri 10/4/13	
701	Pearson develops Introduction powerpoint presentation		3 days	Mon 7/15/13	Wed 7/17/13	PSC
702	CDE reviews and posts feedback		5 days	Thu 7/18/13	Wed 7/24/13	CDE
703	Provide clip images to PSC		12 days	Tue 9/17/13	Wed 10/2/13	Applied Technologies
704	Rangefinding preparation		10 days	Mon 9/23/13	Fri 10/4/13	PSC
705	Meeting Held (WebEX planned)		3 days	Mon 10/7/13	Wed 10/9/13	Pearson/CDE
706	Scoring Training Material Prepared		5 days	Thu 10/10/13	Thu 10/17/13	PSC
707	Scoring Processes		30 days	Thu 8/8/13	Thu 9/19/13	
708	Scorer Recruitment and Hiring		30 days	Thu 8/8/13	Thu 9/19/13	Pearson
709	CR Scoring Guides (this is customer facing)		13 days	Fri 7/19/13	Tue 8/6/13	
710	ETS posts CR scoring guides to Pearson		1 day	Fri 7/19/13	Fri 7/19/13	ETS
711	Pearson reviews CR scoring guides		1 day	Mon 7/22/13	Mon 7/22/13	
712	CDE reviews CR scoring guides		5 days	Tue 7/23/13	Mon 7/29/13	PSC[50%],Manuals[50%]
713	ETS applies edits		5 days	Tue 7/30/13	Mon 8/5/13	CDE
714	ETS produces FINAL scoring guides and posts to CDE and Pearson		1 day	Tue 8/6/13	Tue 8/6/13	ETS
715	Scoring Material Development - post-rangefinding		15 days	Thu 10/17/13	Thu 11/7/13	
716	Pearson posts Scoring Training Materials to CDE and ETS		0 days	Thu 10/17/13	Thu 10/17/13	PSC
717	CDE and ETS review Scoring Training Materials		7 days	Fri 10/18/13	Mon 10/28/13	CDE,ETS
718	CDE and ETS post Scoring Training Materials feedback		0 days	Mon 10/28/13	Mon 10/28/13	CDE,ETS
719	Pearson applies edits and repost Scoring Training Materials to CDE		2 days	Tue 10/29/13	Wed 10/30/13	PSC
720	CDE reviews and provides final approval of Scoring Training Materials		2 days	Thu 10/31/13	Fri 11/1/13	CDE
721	Pearson posts Reliability & Validity Scoring Procedures, Unusual Responses Procedures, and Rescoring Procedures to CDE and ETS		0 days	Thu 10/17/13	Thu 10/17/13	PSC
722	CDE and ETS review Reliability & Validity Scoring Procedures, Unusual Responses Procedures, and Rescoring Procedures		2 days	Fri 10/18/13	Mon 10/21/13	CDE,ETS
723	CDE and ETS post Reliability & Validity Scoring Procedures, Unusual Responses Procedures, and Rescoring Procedures feedback		0 days	Mon 10/21/13	Mon 10/21/13	CDE,ETS
724	Pearson applies edits and repost Reliability & Validity Scoring Procedures, Unusual Responses Procedures, and Rescoring Procedures to CDE		2 days	Tue 10/22/13	Wed 10/23/13	PSC
725	CDE reviews and provides final approval of Reliability & Validity Scoring Procedures, Unusual Responses Procedures, and Rescoring Procedures		3 days	Thu 10/24/13	Mon 10/28/13	CDE
726	Scoring Site Scheduled Visit -- (If CDE wants to do this)		2 days	Wed 11/6/13	Thu 11/7/13	CDE
727	Scoring Window (e-Pen)		4 days	Fri 11/1/13	Thu 11/7/13	
728	Science/Social Studies		4 days	Fri 11/1/13	Thu 11/7/13	
729	**CM18: Performance (constructed response) Scoring Begins (11/1-11/7)**		**0 days**	**Fri 11/1/13**	**Fri 11/1/13**	**PSC**
730	Performance Scoring complete		4 days	Mon 11/4/13	Thu 11/7/13	PSC
731	**Data File Reporting Development**		**106 days**	**Mon 7/1/13**	**Mon 12/2/13**	
732	PERL Extract (Final Student Data File) - ES/MS		4 days	Mon 7/1/13	Fri 7/5/13	
733	Map ARMS schema		0 days	Mon 7/1/13	Mon 7/1/13	ARMS
734	PERL Dev (Final Student Data File)		3 days	Tue 7/2/13	Fri 7/5/13	RSDG
735	Final Student Data File coding is complete		0 days	Fri 7/5/13	Fri 7/5/13	RSDG
736	Prelim SDF- ES/MS		42 days	Mon 8/26/13	Thu 10/24/13	
737	Setup and keys loaded complete		1 day	Mon 8/26/13	Mon 8/26/13	RASE
738	T3 Tool load tables		1 day	Tue 8/27/13	Tue 8/27/13	RASE
739	AIQ testing on Prelim. SDF (Sign off on testing)		3 days	Wed 9/25/13	Fri 9/27/13	AIQ
740	S&TS runs key check file		3 days	Tue 10/1/13	Thu 10/3/13	IT
741	AIQ and PRS review and sign off on key check file (trian)		3 days	Fri 10/4/13	Tue 10/8/13	PRS,AIQ

	CO Summative and Alternate Schedule - FY2014				
ID	Task Name	Duration	Start	Finish	Resource Names
742	PRS runs analysis on Prelim SDF -- Key date for next year of testing (spring)!!	5 days	Wed 10/9/13	Wed 10/16/13	PRS
743	CSS reviews and provides PRS feedback on suspect items (TRIAN review)	3 days	Thu 10/17/13	Mon 10/21/13	CSS
744	PRS completes analysis and provides data to CDE	2 days	Tue 10/22/13	Wed 10/23/13	PRS
745	Prelim Data review (Key date)--WebEx or onsite with CDE	1 day	Thu 10/24/13	Thu 10/24/13	PRS,CDE
746	FINAL Student Data File Validation - ES/MS	22 days	Wed 9/11/13	Thu 10/10/13	
747	AV Testing on Final Student Data File	11 days	Wed 9/11/13	Wed 9/25/13	AV
748	AV sign-offs on Final Student Data File	0 days	Wed 9/25/13	Wed 9/25/13	AV
749	AIQ Testing on Final Student Data File	5 days	Fri 10/4/13	Thu 10/10/13	AIQ
750	AIQ sign-offs on Final Student Data File	0 days	Thu 10/10/13	Thu 10/10/13	AIQ
751	CM22: AIQ Acceptance Test for Reporting Complete	0 days	Thu 10/10/13	Thu 10/10/13	Stoplight
752	Final Student Data File - ES/MS	42 days	Mon 9/30/13	Mon 12/2/13	
753	Alert resolutions in progress (PA/SORM operational Queries)	0 days	Mon 9/30/13	Mon 9/30/13	PMT
754	Monitor Counts between PoTL, SORM, RASE and ARMS	2 days	Fri 11/8/13	Mon 11/11/13	Technologist
755	Final Accept Scores for Field Test process run Complete	1 day	Fri 11/8/13	Fri 11/8/13	PSC
756	CM 20: All Scoring Complete	0 days	Mon 11/11/13	Mon 11/11/13	PSC
757	Extract Scores (Bus sends data to RASE)	1 day	Fri 11/8/13	Fri 11/8/13	POTL
758	RASE combines OE Scores merged with MC Items Complete	1 day	Mon 11/11/13	Mon 11/11/13	RASE
759	RASE sends data to ARMS	1 day	Mon 11/11/13	Mon 11/11/13	RASE/ARMS
760	CA Tech runs PERL/CAWA jobs	2 days	Tue 11/12/13	Wed 11/13/13	CA Techs
761	AIQ approval of Flat file	2 days	Thu 11/14/13	Fri 11/15/13	AIQ
762	CM21: CA Techs delivers Final Student Data File to PRS	1 day	Thu 11/14/13	Thu 11/14/13	CA Techs
763	PRS runs analysis	1 day	Fri 11/15/13	Fri 11/15/13	PRS
764	PRS Sign Off on Final Student Data File	1 day	Mon 11/18/13	Mon 11/18/13	PRS
765	CM24: Student Data File Due to Customer-- PMT posts file that Jerry signs off on	0 days	Mon 11/18/13	Mon 11/18/13	PMT
766	PMT notifies CDE that State Final Student Data File is posted to SFTP	0 days	Mon 11/18/13	Mon 11/18/13	PMT
767	Official Certification of Final SDF by CDE	8 days	Tue 11/19/13	Mon 12/2/13	CDE
768	11.3 Summative - HS	191 days	Mon 5/6/13	Thu 2/6/14	
769	Scoring	176 days	Mon 5/6/13	Thu 1/16/14	
770	ePEN (70 items)	65 days	Tue 8/27/13	Wed 11/27/13	
771	Planning	17 days	Tue 8/27/13	Thu 9/19/13	
772	PSC Program Manager creates 2013 Project Plan	1 day	Fri 9/6/13	Fri 9/6/13	PSC
773	Program Manager approves 2013 Project Plan	3 days	Mon 9/9/13	Wed 9/11/13	PMT-Will
774	CM15: Create, Review, and Baseline OE Spreadsheet	7 days	Tue 8/27/13	Thu 9/5/13	PSC
775	Review and Baseline ePen CRAD Addendum (9/6)	1 day	Thu 9/5/13	Thu 9/5/13	ePEN PIM
776	Report sets spreadsheets	1 day	Thu 9/5/13	Thu 9/5/13	PSC
777	All inputs received and baselined	0 days	Thu 9/5/13	Thu 9/5/13	PSC
778	Create and baseline Project Set Up (standard duration is 10 days)	9 days	Fri 9/6/13	Thu 9/19/13	ePEN PIM
779	Submit AT Clip Import Spec for STAGE	1 day	Fri 9/6/13	Fri 9/6/13	ePEN PIM
780	Update TAM in MTS2, QC, Prod with AT Clip Import Spec data	1 day	Mon 9/9/13	Tue 9/10/13	PMT-Dave,Software AIQ
781	Update PearsonAccess Test Admin Config Doc with AT Clip Import Spec data	3 days	Mon 9/9/13	Wed 9/11/13	PA PIM
782	Verify AV has latest version of ePEN available for testing	0 days	Wed 9/11/13	Wed 9/11/13	EPEN DEV
783	ePEN Testing	43 days	Fri 9/20/13	Wed 11/20/13	
784	ePEN AV Testing (standard duration is 20 days)	20 days	Fri 9/20/13	Fri 10/18/13	EPEN AV
785	Publish Online Test in MTS2 (end 9/27)	3 days	Tue 9/24/13	Thu 9/26/13	Software AIQ
786	AV ePen takes Online test in MTS2 environment	2 days	Fri 9/27/13	Tue 10/1/13	EPEN AV
787	Online Test Extract by ePEN from MTS2 for Clip Review	3 days	Wed 10/2/13	Fri 10/4/13	ePEN PIM
788	ePEN AV Clip Review/sign off - Online Only	2 days	Mon 10/7/13	Wed 10/9/13	EPEN AV
789	Submit AT Clip Import Spec for Prod	1 day	Wed 10/9/13	Thu 10/10/13	ePEN PIM
790	AIQ submits TestNav test deck	5 days	Tue 11/5/13	Mon 11/11/13	AIQ
791	AIQ testing and sign off of ePen	7 days	Tue 11/12/13	Wed 11/20/13	AIQ
792	UAT and Prod Setup	28 days	Mon 10/21/13	Wed 11/27/13	
793	extract production online batches	21 days	Tue 10/29/13	Tue 11/26/13	Technologist
794	UAT set up	5 days	Mon 10/21/13	Fri 10/25/13	ePEN PIM

ID	Task Name	Duration	Start	Finish	Resource Names
				CO Summative and Alternate Schedule - FY2014	
795	PSC UAT (standard durationis 5 days)	5 days	Mon 10/28/13	Fri 11/1/13	PSC
796	Prod set up	5 days	Thu 11/21/13	Wed 11/27/13	ePEN PIM
797	ePEN Prod Ready (before scoring can begin)	0 days	Wed 11/27/13	Wed 11/27/13	Stoplight
798	Scoring (RASE) Development & Testing	144 days	Mon 5/6/13	Wed 11/27/13	
799	Develop Scoring System	43 days	Mon 5/6/13	Fri 7/5/13	RASE
800	AV Testing of Scoring System	10 days	Mon 10/21/13	Fri 11/1/13	AV
801	AV Signoff on Scoring System	0 days	Fri 11/1/13	Fri 11/1/13	AV
802	AIQ Testing of Scoring System (via data file validation)	5 days	Thu 11/21/13	Wed 11/27/13	AIQ
803	AIQ Signoff on Scoring System	0 days	Wed 11/27/13	Wed 11/27/13	AIQ
804	CM 17: AIQ Acceptance Test for Scoring Complete	0 days	Wed 11/27/13	Wed 11/27/13	AIQ
805	Production - OLT	0 days	Wed 11/27/13	Wed 11/27/13	
806	Load ePEN	0 days	Wed 11/27/13	Wed 11/27/13	Technologist
807	Rangefinding (Anchor Review)	41 days	Tue 10/15/13	Thu 12/12/13	
808	Rangefinding Preparation	33 days	Tue 10/15/13	Mon 12/2/13	
809	Pearson develops Introduction powerpoint presentation	3 days	Tue 10/15/13	Thu 10/17/13	PSC
810	CDE reviews and posts feedback	5 days	Fri 10/18/13	Thu 10/24/13	CDE
811	Provide clip images to PSC	20 days	Wed 10/30/13	Tue 11/26/13	Applied Technologies
812	Rangefinding preparation	10 days	Fri 11/15/13	Mon 12/2/13	PSC
813	Meeting Held	3 days	Tue 12/3/13	Thu 12/5/13	Pearson/CDE
814	Scoring Training Material Prepared	5 days	Fri 12/6/13	Thu 12/12/13	PSC
815	Scoring Processes	30 days	Tue 10/15/13	Mon 11/25/13	
816	Scorer Recruitment and Hiring	30 days	Tue 10/15/13	Mon 11/25/13	Pearson
817	CR Scoring Guides (this is customer facing)	12 days	Fri 7/19/13	Mon 8/5/13	
818	ETS posts CR scoring guides to Pearson and CDE	1 day	Fri 7/19/13	Fri 7/19/13	ETS
819	Pearson and CDE reviews CR scoring guides	5 days	Mon 7/22/13	Fri 7/26/13	PSC[50%],Manuals[50%]
820	ETS applies edits	5 days	Mon 7/29/13	Fri 8/2/13	ETS
821	ETS produces FINAL scoring guides and posts to CDE and Pearson	1 day	Mon 8/5/13	Mon 8/5/13	ETS
822	Scoring Material Development - post-rangefinding	23 days	Thu 12/12/13	Thu 1/16/14	
823	Pearson posts Scoring Training Materials to CDE and ETS	0 days	Thu 12/12/13	Thu 12/12/13	PSC
824	CDE and ETS review Scoring Training Materials	11 days	Fri 12/13/13	Mon 12/30/13	CDE,ETS
825	CDE and ETS post Scoring Training Materials feedback	0 days	Mon 12/30/13	Mon 12/30/13	CDE,ETS
826	Pearson applies edits and repost Scoring Training Materials to CDE	5 days	Tue 12/31/13	Tue 1/7/14	PSC
827	CDE reviews and provides final approval of Scoring Training Materials	3 days	Wed 1/8/14	Fri 1/10/14	CDE
828	Pearson posts Reliability & Validity Scoring Procedures, Unusual Responses Procedures, and Rescoring Procedures to CDE and ETS	0 days	Thu 12/12/13	Thu 12/12/13	PSC
829	CDE and ETS review Reliability & Validity Scoring Procedures, Unusual Responses Procedures, and Rescoring Procedures	2 days	Fri 12/13/13	Mon 12/16/13	CDE,ETS
830	CDE and ETS post Reliability & Validity Scoring Procedures, Unusual Responses Procedures, and Rescoring Procedures feedback	0 days	Mon 12/16/13	Mon 12/16/13	CDE,ETS
831	Pearson applies edits and repost Reliability & Validity Scoring Procedures, Unusual Responses Procedures, and Rescoring Procedures to CDE	2 days	Tue 12/17/13	Wed 12/18/13	PSC
832	CDE reviews and provides final approval of Reliability & Validity Scoring Procedures, Unusual Responses Procedures, and Rescoring Procedures	3 days	Thu 12/19/13	Mon 12/23/13	CDE
833	Scoring Site Scheduled Visit (IF CDE wants to do this)	2 days	Wed 1/15/14	Thu 1/16/14	CDE
834	Scoring Window (e-Pen)	4 days	Fri 1/10/14	Thu 1/16/14	
835	Science/Social Studies	4 days	Fri 1/10/14	Thu 1/16/14	
836	CM18: Performance (constructed response) Scoring Begins (insert dates here)	0 days	Fri 1/10/14	Fri 1/10/14	PSC
837	Performance Scoring complete	4 days	Mon 1/13/14	Thu 1/16/14	PSC
838	Data File Reporting Development	166 days	Tue 6/11/13	Thu 2/6/14	
839	PERL Extract (Final Student Data File)	18 days	Tue 6/11/13	Fri 7/5/13	
840	Map ARMS schema	14 days	Tue 6/11/13	Fri 6/28/13	ARMS
841	PERL Dev (Final Student Data File)	3 days	Tue 7/2/13	Fri 7/5/13	RSDG
842	Final Student Data File coding is complete	0 days	Fri 7/5/13	Fri 7/5/13	RSDG
843	Prelim SDF	80 days	Mon 8/26/13	Thu 12/19/13	
844	Setup and keys loaded complete	1 day	Mon 8/26/13	Mon 8/26/13	RASE
845	T3 Tool load tables	1 day	Tue 8/27/13	Tue 8/27/13	RASE
846	AIQ testing on Prelim. SDF (Sign off on testing)	3 days	Tue 11/12/13	Thu 11/14/13	AIQ
847	S&TS runs key check file	3 days	Mon 11/25/13	Wed 11/27/13	IT

					CO Summative and Alternate Schedule - FY2014
ID	Task Name	Duration	Start	Finish	Resource Names
848	AIQ and PRS review and sign off on key check file (trian)	3 days	Mon 12/2/13	Wed 12/4/13	PRS,AIQ
849	PRS runs analysis on Prelim SDF -- Key date for next year of testing (spring)!!	5 days	Thu 12/5/13	Wed 12/11/13	PRS
850	CSS reviews and provides PRS feedback on suspect items (TRIAN review)	3 days	Thu 12/12/13	Mon 12/16/13	CSS
851	PRS completes analysis and provides data to CDE	2 days	Tue 12/17/13	Wed 12/18/13	PRS
852	Prelim Data reviw (Key date)--WebEx or onsite with CDE	1 day	Thu 12/19/13	Thu 12/19/13	PRS,CDE
853	FINAL Student Data File Validation	28 days	Mon 10/21/13	Wed 11/27/13	
854	AV Testing on Final Student Data File	11 days	Mon 10/21/13	Mon 11/4/13	AV
855	AV sign-offs on Final Student Data File	0 days	Mon 11/4/13	Mon 11/4/13	AV
856	AIQ Testing on Final Student Data File	5 days	Thu 11/21/13	Wed 11/27/13	AIQ
857	AIQ sign-offs on Final Student Data File	0 days	Wed 11/27/13	Wed 11/27/13	AIQ
858	**CM22: AIQ Acceptance Test for Reporting Complete**	**0 days**	**Wed 11/27/13**	**Wed 11/27/13**	**Stoplight**
859	Final Student Data File	50 days	Fri 11/22/13	Thu 2/6/14	
860	Alert resolutions in progress (PA/SORM operational Queries)	0 days	Fri 11/22/13	Fri 11/22/13	PMT
861	Monitor Counts between PoTL, SORM, RASE and ARMS	2 days	Fri 1/17/14	Mon 1/20/14	Technologist
862	Final Accept Scores for Field Test process run Complete	1 day	Fri 1/17/14	Fri 1/17/14	PSC
863	**CM 20: All Scoring Complete**	**0 days**	**Mon 1/20/14**	**Mon 1/20/14**	**PSC**
864	Extract Scores (Bus sends data to RASE)	1 day	Fri 1/17/14	Fri 1/17/14	POTL
865	RASE combines OE Scores merged with MC Items Complete	1 day	Mon 1/20/14	Mon 1/20/14	RASE
866	RASE sends data to ARMS	1 day	Mon 1/20/14	Mon 1/20/14	RASE/ARMS
867	CA Tech runs PERL/CAWA jobs	2 days	Tue 1/21/14	Wed 1/22/14	CA Techs
868	AIQ approval of Flat file	2 days	Thu 1/23/14	Fri 1/24/14	AIQ
869	**CM21: CA Techs delivers Final Student Data File to PRS**	**1 day**	**Thu 1/23/14**	**Thu 1/23/14**	**CA Techs**
870	PRS runs analysis	1 day	Fri 1/24/14	Fri 1/24/14	PRS
871	PRS Sign Off on Final Student Data File	1 day	Mon 1/27/14	Mon 1/27/14	PRS
872	**CM24: Student Data File Due to Customer-- PMT posts file that Jerry signs off on**	**0 days**	**Mon 1/27/14**	**Mon 1/27/14**	**PMT**
873	PMT notifies CDE that State Final Student Data File is posted to SFTP	0 days	Mon 1/27/14	Mon 1/27/14	PMT
874	Official Certification of Final SDF by CDE	8 days	Tue 1/28/14	Thu 2/6/14	CDE
875	12.0 CONTENT AND PSY POST-ADMIN ACTIVITIES	259 days	Fri 2/1/13	Mon 2/10/14	
876	12.1 Summative - ES/MS	104 days	Mon 7/8/13	Wed 12/4/13	
877	**Field Test and Operational Analysis**	**1 day**	**Mon 7/8/13**	**Mon 7/8/13**	
878	Field Test Sampling Design	1 day	Mon 7/8/13	Mon 7/8/13	TMRS
879	Hand off post-admin item bank back to ETS (dependent on TestNav 8 process)	2 days	Tue 10/1/13	Wed 10/2/13	DCP
880	Pearson Provide item data to ETS to upload	2 days	Tue 11/19/13	Wed 11/20/13	PRS
881	Data Review	40 days	Mon 10/7/13	Wed 12/4/13	
882	Meeting Agenda/Plan - Power Point Presentation (or materials/plan determined appropriate by CDE and PRS)	16 days	Mon 10/7/13	Tue 10/29/13	
883	TMRS produces power point presentation	3 days	Mon 10/7/13	Wed 10/9/13	TMRS
884	TMRS posts PPP to CDE for review	0 days	Wed 10/9/13	Wed 10/9/13	TMRS
885	CDE reviews PPP	5 days	Thu 10/10/13	Thu 10/17/13	CDE
886	CDE posts feedback to TMRS	0 days	Thu 10/17/13	Thu 10/17/13	CDE
887	TMRS revises PPP per CDE feedback	2 days	Fri 10/18/13	Mon 10/21/13	TMRS
888	TMRS posts revised PPP to CDE	0 days	Mon 10/21/13	Mon 10/21/13	TMRS
889	CDE reviews revised PPP	5 days	Tue 10/22/13	Mon 10/28/13	CDE
890	CDE provides final approval to PRS	0 days	Mon 10/28/13	Mon 10/28/13	CDE
891	TMRS posts training material PPP to CDE (2 weeks before meeting)	1 day	Tue 10/29/13	Tue 10/29/13	TMRS
892	Data and Data Cards	7 days	Tue 11/19/13	Wed 11/27/13	
893	TMRS to run data and analysis for CDE in advance of meeting	5 days	Tue 11/19/13	Mon 11/25/13	TMRS
894	TMRS to create pdf data cards (after scored data)	2 days	Tue 11/26/13	Wed 11/27/13	TMRS
895	TMRS posts data and data cards to CDE	0 days	Wed 11/27/13	Wed 11/27/13	TMRS
896	Data Review Meeting	3 days	Mon 12/2/13	Wed 12/4/13	
897	Data Review Meeting Held	2 days	Mon 12/2/13	Tue 12/3/13	CDE,Pearson
898	Item Reconciliation with CDE (Review/Finalize core form) --link with SPRING TEST CONSTRUCTION	1 day	Wed 12/4/13	Wed 12/4/13	CDE,Pearson
899	12.2 Summative - HS	150 days	Mon 7/8/13	Mon 2/10/14	
900	**Field Test and Operational Analysis**	**1 day**	**Mon 7/8/13**	**Mon 7/8/13**	

	CO Summative and Alternate Schedule - FY2014				
ID	Task Name	Duration	Start	Finish	Resource Names
901	Field Test Sampling Design	1 day	Mon 7/8/13	Mon 7/8/13	TMRS
902	Hand off post-admin item bank back to ETS (dependent on TestNav 8 process)	2 days	Mon 11/25/13	Tue 11/26/13	DCP
903	Pearson Provide item data to ETS to upload	2 days	Tue 1/28/14	Wed 1/29/14	PRS
904	Data Review	86 days	Mon 10/7/13	Mon 2/10/14	
905	Meeting Agenda/Plan - Power Point Presentation (or materials/plan determined appropriate by CDE and PRS)	16 days	Mon 10/7/13	Tue 10/29/13	
906	TMRS produces power point presentation	3 days	Mon 10/7/13	Wed 10/9/13	TMRS
907	TMRS posts PPP to CDE for review	0 days	Wed 10/9/13	Wed 10/9/13	TMRS
908	CDE reviews PPP	5 days	Thu 10/10/13	Thu 10/17/13	CDE
909	CDE posts feedback to TMRS	0 days	Thu 10/17/13	Thu 10/17/13	CDE
910	TMRS revises PPP per CDE feedback	2 days	Fri 10/18/13	Mon 10/21/13	TMRS
911	TMRS posts revised PPP to CDE	0 days	Mon 10/21/13	Mon 10/21/13	TMRS
912	CDE reviews revised PPP	5 days	Tue 10/22/13	Mon 10/28/13	CDE
913	CDE provides final approval to PRS	0 days	Mon 10/28/13	Mon 10/28/13	CDE
914	TMRS posts training material PPP to CDE (2 weeks before meeting)	1 day	Tue 10/29/13	Tue 10/29/13	TMRS
915	Data and Data Cards	7 days	Tue 1/28/14	Wed 2/5/14	
916	TMRS to run data and analysis for CDE in advance of meeting	5 days	Tue 1/28/14	Mon 2/3/14	TMRS
917	TMRS to create pdf data cards (after scored data)	2 days	Tue 2/4/14	Wed 2/5/14	TMRS
918	TMRS posts data and data cards to CDE	0 days	Wed 2/5/14	Wed 2/5/14	TMRS
919	Data Review Meeting	3 days	Thu 2/6/14	Mon 2/10/14	
920	Data Review Meeting Held	2 days	Thu 2/6/14	Fri 2/7/14	CDE,Pearson
921	Item Reconciliation with CDE (Review/Finalize core form) --link with SPRING TEST CONSTRUCTION	1 day	Mon 2/10/14	Mon 2/10/14	CDE,Pearson
922	12.3 CoAlt - HS	244 days	Fri 2/1/13	Mon 1/20/14	
923	Field Test and Operational Analysis	235 days	Fri 2/1/13	Tue 1/7/14	
924	Field Test Sampling Design	1 day	Fri 2/1/13	Fri 2/1/13	TMRS
925	Psychometric Analysis of Field Test	15 days	Mon 12/16/13	Tue 1/7/14	TMRS
926	Update Item Bank- only ITTB	1 day	Mon 12/16/13	Mon 12/16/13	
927	Upload stats into tracker and change metadata if needed	1 day	Mon 12/16/13	Mon 12/16/13	RA
928	Scaling and Calibrating	91 days	Mon 8/5/13	Fri 12/13/13	
929	Verify Spring calibration, scaling, equating specs apply to Fall	5 days	Mon 8/5/13	Fri 8/9/13	CDE,CDE-Jasmine
930	Student data file received and QC of data	3 days	Wed 12/11/13	Fri 12/13/13	RA,RS
931	Data Review	24 days	Mon 12/16/13	Mon 1/20/14	
932	Preparation for Data Review	19 days	Mon 12/16/13	Mon 1/13/14	
933	Determine items that will be reviewed and order of items, create pull lists	5 days	Mon 12/16/13	Fri 12/20/13	CSS,RS,RA
934	Create item statistic pages/tables/graphs and merge with item images	3 days	Mon 12/23/13	Thu 12/26/13	RS,RA
935	QC and finalize electronic files	5 days	Fri 12/27/13	Fri 1/3/14	CSS
936	Create item judgment forms	1 day	Mon 1/6/14	Mon 1/6/14	CSS
937	CDE Review/Approval of training materials and files	5 days	Tue 1/7/14	Mon 1/13/14	CDE,CDE-Jasmine
938	Data Review WebEx (Date is TBD)	1 day	Wed 1/8/14	Wed 1/8/14	)E[50%],CDE-Jasmine[50%]
939	Post Data Review Activities	2 days	Thu 1/16/14	Fri 1/17/14	
940	Status change in item bank of data review items	1 day	Thu 1/16/14	Thu 1/16/14	CSS
941	Provide list of Rejected/DNUed items to Design to remove from publishing pool (ITTB only)	1 day	Thu 1/16/14	Thu 1/16/14	CSS
942	Integrate accept/reject decisions into the current statistical item bank	1 day	Fri 1/17/14	Fri 1/17/14	RA,RS
943	Preparation for Item Writing (for 2014 Operational Assessment)	24 days	Mon 12/16/13	Mon 1/20/14	
944	CSS Review of Field Test Data	2 days	Mon 12/16/13	Tue 12/17/13	CSS
945	CDE Review of Field Test Data	2 days	Mon 12/16/13	Tue 12/17/13	CDE
946	Draft item writing training materials to CDE	0 days	Mon 12/16/13	Mon 12/16/13	CSS
947	Draft item writing training material feedback to Pearson	5 days	Mon 12/16/13	Fri 12/20/13	CDE
948	Update item writing plans based on the review of the FT data	1 day	Wed 12/18/13	Wed 12/18/13	CSS
949	Update item development plans based on the review of the FT data	1 day	Wed 12/18/13	Wed 12/18/13	CSS
950	Prepare Item Writing recommendations for CDE	2 days	Thu 12/19/13	Fri 12/20/13	CSS
951	Deliver Item Writing recommendations to CDE	0 days	Fri 12/20/13	Fri 12/20/13	CSS
952	CDE review of recommendations	1 day	Mon 12/23/13	Mon 12/23/13	CDE
953	CDE and Pearson meeting to discuss updated Item Writing Recommendations	2 days	Tue 12/24/13	Thu 12/26/13	CSS,CDE

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
954	Final item writing training materials to CDE	1 day	Fri 12/27/13	Fri 12/27/13	CSS
955	CDE review of item writing training materials and feedback to Pearson	1 day	Mon 12/30/13	Mon 12/30/13	CDE
956	Ship item writing training material	2 days	Tue 12/31/13	Thu 1/2/14	PMT
957	Item Writing Workshop (Date is TBD)--currently looking at Sat, 1/18-Monday 1/20	1 day	Mon 1/20/14	Mon 1/20/14	CSS,CDE
958	Colorado Spring 2014 and new development	557 days	Tue 7/2/13	Mon 8/31/15	
959	Assessment Development	241 days	Tue 7/2/13	Thu 6/12/14	
960	Style Guide	30 days	Tue 7/2/13	Tue 8/13/13	
961	Colorado Style Guide - Draft	30 days	Tue 7/2/13	Tue 8/13/13	Content
962	Colorado Style Guide - Final for year	0 days	Tue 8/13/13	Tue 8/13/13	Content
963	Item Development	241 days	Tue 7/2/13	Thu 6/12/14	
964	Item Development Spring 2014 Field Test	72 days	Tue 7/2/13	Fri 10/11/13	
965	Item Development Batch Review Process	65 days	Tue 7/2/13	Wed 10/2/13	
966	CDE pre-review	35 days	Wed 8/14/13	Wed 10/2/13	
967	Pearson finalizes item previewr files for committee	5 days	Thu 10/3/13	Wed 10/9/13	
968	Item Review	29 days	Tue 9/3/13	Fri 10/11/13	
969	Recruit Content Review Participants	20 days	Tue 9/3/13	Mon 9/30/13	
970	Meeting materials developed	10 days	Tue 9/3/13	Mon 9/16/13	
971	CDE review/approval of materials	5 days	Tue 9/17/13	Mon 9/23/13	
972	Conduct Content/Bias Review meeting	2 days	Tue 10/8/13	Wed 10/9/13	
973	Content Review Reconcillation	1 day	Thu 10/10/13	Thu 10/10/13	
974	Item Development Complete	1 day	Fri 10/11/13	Fri 10/11/13	
975	Item Development (Fall 2014 HS Field Test)	184 days	Tue 7/2/13	Tue 3/25/14	
976	Item Writer Recruiting	20 days	Thu 1/2/14	Wed 1/29/14	
977	Develop Training Materials and Item Development Plans	5 days	Thu 1/2/14	Wed 1/8/14	
978	Item Development Training Meeting 1 Materials – CDE Review	5 days	Thu 1/9/14	Wed 1/15/14	
979	Edit and ship materials after CDE review	4 days	Thu 1/16/14	Tue 1/21/14	ETS
980	Item Development Meeting 1	2 days	Wed 1/22/14	Thu 1/23/14	ETS
981	Pearson provides developers feedback	43 days	Fri 1/24/14	Tue 3/25/14	ETS
982	Develop training materials and item development plans (meeting 2)	5 days	Tue 7/2/13	Tue 7/9/13	ETS
983	Item Writer Recruiting	20 days	Fri 2/14/14	Thu 3/13/14	Pearson
984	Item Development Meeting 2 Materials – CDE Review	3 days	Fri 2/14/14	Tue 2/18/14	CDE
985	Edit and ship materials after CDE review	4 days	Wed 2/19/14	Mon 2/24/14	ETS
986	Item Development Meeting 2	3 days	Tue 2/25/14	Thu 2/27/14	ETS
987	Performance Event Stimuli and Storyboards (Spring 2015 Field Test)	149 days	Tue 7/2/13	Tue 2/4/14	
988	Stimuli and Storyboard Develoment	108 days	Fri 7/19/13	Mon 12/23/13	
989	Passage Selection - CDE Review	10 days	Tue 7/2/13	Tue 7/16/13	CDE
990	Prepare Stimuli and Story Board Training Meeting materials	7 days	Thu 12/26/13	Mon 1/6/14	ETS
991	Stimuli and Storyboard Training Meeting Materials- CDE Review	6 days	Mon 1/6/14	Mon 1/13/14	CDE
992	Edit and ship materials after CDE review	10 days	Tue 1/14/14	Mon 1/27/14	ETS
993	Stimuli and Storyboard Review (to be combined with another meeting or virtual)	3 days	Tue 1/28/14	Thu 1/30/14	ETS
994	Content sends final results of Stimuli and Storyboard meeting to CDE	1 day	Tue 2/4/14	Tue 2/4/14	ETS
995	Item Development (Spring 2015 ES/MS Field Test)	99 days	Mon 1/27/14	Thu 6/12/14	
996	Item Writer Recruiting	25 days	Mon 1/27/14	Fri 2/28/14	
997	Develop Training Materials and Item Development Plans	5 days	Tue 2/11/14	Mon 2/17/14	
998	Item Development Training Meeting 1 Materials – CDE Review	5 days	Tue 2/18/14	Mon 2/24/14	
999	Edit and ship materials after CDE review	10 days	Tue 2/25/14	Mon 3/10/14	ETS
1000	Item Development Meeting 1	3 days	Tue 3/11/14	Thu 3/13/14	ETS
1001	Content provides developers feedback	43 days	Fri 3/14/14	Tue 5/13/14	ETS
1002	Content develops training materials and item development plans (meeting 2)	5 days	Wed 5/14/14	Tue 5/20/14	ETS
1003	Item Writer Recruiting	25 days	Mon 4/28/14	Fri 5/30/14	Pearson
1004	Item Development Meeting 2 Materials – CDE Review	3 days	Wed 5/21/14	Fri 5/23/14	CDE
1005	Edit and ship materials after CDE review	10 days	Mon 5/26/14	Fri 6/6/14	ETS
1006	Item Development Meeting 2	3 days	Tue 6/10/14	Thu 6/12/14	ETS

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
1007	Data Review	139 days	Mon 7/8/13	Fri 1/24/14	
1008	Data Review (Spring 2013 Field Test)	40 days	Mon 7/8/13	Fri 8/30/13	
1009	Recruit Data Review Participants	32 days	Mon 7/8/13	Tue 8/20/13	Pearson
1010	Content Prints Data Review Training Materials	5 days	Mon 7/22/13	Fri 7/26/13	ETS
1011	Produce Data Review Training Materials – CDE Review	4 days	Mon 7/29/13	Thu 8/1/13	CDE
1012	Edit and ship materials after CDE review	10 days	Fri 8/2/13	Thu 8/15/13	ETS
1013	Conduct Data Review meeting	2 days	Wed 8/21/13	Thu 8/22/13	ETS
1014	Content implements edits suggested by committee	5 days	Fri 8/23/13	Thu 8/29/13	ETS
1015	Content provides final results of Data Review Meetings	1 day	Fri 8/30/13	Fri 8/30/13	ETS
1016	Data Review (Fall 2013 ES/MS Field Test) - Meeting with CDE and Pearson only	35 days	Thu 10/24/13	Fri 12/13/13	
1017	Pearson and CDE review preliminary field test results	1 day	Thu 10/24/13	Thu 10/24/13	Pearson,CDE
1018	Content Prints Data Review Training Materials	5 days	Fri 11/15/13	Thu 11/21/13	ETS
1019	Produce Data Review Training Materials – CDE Review	4 days	Fri 11/22/13	Wed 11/27/13	CDE
1020	Edit and ship materials after CDE review	10 days	Mon 12/2/13	Fri 12/13/13	ETS
1021	Conduct Data Review meeting	2 days	Tue 12/3/13	Wed 12/4/13	ETS
1022	Pearson/CDE reconcile and update operational item bank	2 days	Thu 12/5/13	Fri 12/6/13	
1023	Content implements edits suggested by CDE	5 days	Thu 12/5/13	Wed 12/11/13	ETS
1024	Content provides final results of Data Review Meetings	1 day	Thu 12/12/13	Thu 12/12/13	ETS
1025	Data Review (Fall 2013 HS Field Test)	45 days	Tue 11/19/13	Fri 1/24/14	
1026	Recruit Data Review Participants	32 days	Tue 11/19/13	Tue 1/7/14	Pearson
1027	Content Prints Data Review Training Materials	5 days	Mon 12/9/13	Fri 12/13/13	ETS
1028	Produce Data Review Training Materials – CDE Review	4 days	Mon 12/16/13	Thu 12/19/13	CDE
1029	Edit and ship materials after CDE review	10 days	Fri 12/20/13	Mon 1/6/14	ETS
1030	Conduct Data Review meeting	2 days	Wed 1/8/14	Thu 1/9/14	ETS
1031	Content implements edits suggested by committee	10 days	Fri 1/10/14	Thu 1/23/14	ETS
1032	Content provides final results of Data Review Meetings	1 day	Fri 1/24/14	Fri 1/24/14	ETS
1033	Form Development (Spring 2014 Operational)	170 days	Tue 7/2/13	Wed 3/5/14	
1034	Field Testing Plan	20 days	Tue 7/2/13	Tue 7/30/13	Pearson
1035	Core Test Form Development (Science and Social Studies)	39 days	Fri 10/18/13	Fri 12/13/13	
1036	Content constructs forms + 1st embedded	10 days	Fri 10/18/13	Thu 10/31/13	Content
1037	CDE reviews forms	5 days	Fri 11/1/13	Thu 11/7/13	CDE
1038	Content revises forms based on CDE review	5 days	Fri 11/8/13	Thu 11/14/13	Content
1039	Content finalizes forms based on final data review	0 days	Fri 12/6/13	Fri 12/6/13	
1040	Core Test Form Development – CDE Review Final	5 days	Mon 12/9/13	Fri 12/13/13	CDE
1041	Core Test Form Development – Final	0 days	Fri 12/13/13	Fri 12/13/13	Content
1042	Embedded Field Test Form Development	46 days	Mon 12/16/13	Wed 2/19/14	
1043	Content constructs forms	30 days	Mon 12/16/13	Tue 1/28/14	Content
1044	CDE reviews forms	6 days	Wed 1/29/14	Wed 2/5/14	CDE
1045	Content revises forms based on CDE review	5 days	Thu 2/6/14	Wed 2/12/14	CDE
1046	Embedded Field Test Form Development – Final	5 days	Thu 2/13/14	Wed 2/19/14	Content
1047	Special Populations	152 days	Tue 7/2/13	Fri 2/7/14	
1048	Accommodations Procedures Manual review rounds	60 days	Tue 7/2/13	Wed 9/25/13	Pearson
1049	Accommodations Procedures Manual - CDE Review Final	5 days	Thu 9/26/13	Wed 10/2/13	CDE
1050	Paper/Pencil Accommodated Form	25 days	Fri 11/15/13	Mon 12/23/13	
1051	Paper/Pencil Development	20 days	Fri 11/15/13	Mon 12/16/13	Content
1052	Accommodated Materials: Paper/Pencil - CDE Review Final	5 days	Tue 12/17/13	Mon 12/23/13	CDE
1053	Content sends Production ready files to Pearson (Files to Print)	0 days	Mon 12/23/13	Mon 12/23/13	Content
1054	Large Print Test Form Development	25 days	Mon 12/16/13	Tue 1/21/14	
1055	Large Print Development	20 days	Mon 12/16/13	Tue 1/14/14	Content
1056	Accommodated Materials: Large Print - CDE Review Final	5 days	Wed 1/15/14	Tue 1/21/14	CDE
1057	Content sends Production ready files to Pearson (Files to Print)	0 days	Tue 1/21/14	Tue 1/21/14	Content
1058	Braille Test Form Development	57 days	Fri 11/15/13	Fri 2/7/14	
1059	Content performs accessibilty review of approved forms	10 days	Fri 11/15/13	Mon 12/2/13	Content

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
1060	Content prepares and ships materials for Braille forms review	5 days	Tue 12/3/13	Mon 12/9/13	Content
1061	Braille Development	30 days	Tue 12/10/13	Wed 1/22/14	Content
1062	Accommodated Materials: Braille Review	0 days	Wed 1/22/14	Wed 1/22/14	Content
1063	Braille Forms Review Meeting	5 days	Thu 1/23/14	Wed 1/29/14	Content
1064	Content sends Braille summary meeting results to CDE	2 days	Thu 1/30/14	Fri 1/31/14	Content
1065	Braille vendor updates sends Production ready files to Pearson (Files to Print)	5 days	Mon 2/3/14	Fri 2/7/14	Content
1066	English and Spanish Oral Scripts	35 days	Mon 12/16/13	Tue 2/4/14	
1067	Content constructs scripts	20 days	Mon 12/16/13	Tue 1/14/14	Content
1068	CDE reviews scripts	5 days	Wed 1/15/14	Tue 1/21/14	CDE
1069	Content revises scripts based on CDE review	5 days	Wed 1/22/14	Tue 1/28/14	Content
1070	Accommodated Materials: English Oral Scripts – CDE Review Final	5 days	Wed 1/29/14	Tue 2/4/14	CDE
1071	Accommodated Materials: Spanish Oral Scripts – CDE Review Final	5 days	Wed 1/29/14	Tue 2/4/14	CDE
1072	Content sends Production ready files to Pearson (files to print)	0 days	Tue 2/4/14	Tue 2/4/14	Content
1073	Certification for District Translators	65 days	Tue 7/2/13	Wed 10/2/13	
1074	Procedures document produced	60 days	Tue 7/2/13	Wed 9/25/13	Content
1075	Procedures for Certification for District Translators – CDE Review Final	5 days	Thu 9/26/13	Wed 10/2/13	CDE
1076	Test Ancillary Material - Development	170 days	Tue 7/2/13	Wed 3/5/14	
1077	District and School Assessment Coordinator review rounds	60 days	Tue 7/2/13	Wed 9/25/13	Pearson
1078	Document Development: District and School Assessment Coordinators Manual – CDE Review Final	5 days	Thu 9/26/13	Wed 10/2/13	CDE
1079	Proctors Manual review rounds	30 days	Mon 11/18/13	Thu 1/2/14	Pearson
1080	Document Development: Proctors Manual – CDE Review Final	5 days	Fri 1/3/14	Thu 1/9/14	CDE
1081	Certification Forms review rounds	60 days	Tue 7/2/13	Wed 9/25/13	Pearson
1082	Document Development: Certification Forms – CDE Review Final	5 days	Thu 9/26/13	Wed 10/2/13	CDE
1083	Answer Document review rounds	45 days	Tue 7/2/13	Wed 9/4/13	Pearson
1084	Document Development: Answer Document Layout - CDE Review Final	5 days	Thu 9/5/13	Wed 9/11/13	CDE
1085	Document Development: Test Book\Content/Answer Documents – CDE Review Final	5 days	Thu 2/27/14	Wed 3/5/14	CDE
1086	Ancillary Materials (Manipulatives) review rounds	60 days	Tue 7/2/13	Wed 9/25/13	Pearson
1087	Document Development: Ancillary Materials – CDE Review Final	5 days	Thu 9/26/13	Wed 10/2/13	CDE
1088	Assessment Administration	557 days	Tue 7/2/13	Mon 8/31/15	
1089	Orders for Materials	45 days	Mon 2/3/14	Fri 4/4/14	
1090	Pre-ID File Transfer	0 days	Mon 2/3/14	Mon 2/3/14	CDE
1091	Materials Ordering System Operational	0 days	Mon 2/3/14	Mon 2/3/14	Pearson
1092	Materials Ordering Window	20 days	Mon 2/3/14	Fri 2/28/14	
1093	Online Rosters Generated	5 days	Mon 3/3/14	Fri 3/7/14	Pearson
1094	Additional Materials Ordering Window	10 days	Mon 3/24/14	Fri 4/4/14	
1095	Test and Ancillary Material - Production	102 days	Thu 10/3/13	Fri 2/28/14	
1096	Proctors Manual Produced	15 days	Fri 1/10/14	Thu 1/30/14	Pearson
1097	Test Book\Content/Answer Documents Produced	10 days	Tue 12/24/13	Wed 1/8/14	Pearson
1098	Ancillaries Produced	15 days	Thu 10/3/13	Thu 10/24/13	Pearson
1099	Accommodated Materials Produced	15 days	Mon 2/10/14	Fri 2/28/14	Pearson
1100	Certification Forms Produced	5 days	Thu 10/3/13	Wed 10/9/13	Pearson
1101	Packaging and Delivery	60 days	Thu 1/2/14	Wed 3/26/14	
1102	Colorado Districts in Shipping System	0 days	Mon 2/3/14	Mon 2/3/14	Pearson
1103	Packaging Specifications Finalized	0 days	Thu 1/2/14	Thu 1/2/14	Pearson
1104	Non-secure Materials Packaged	15 days	Mon 3/3/14	Fri 3/21/14	Pearson
1105	Non-secure Materials Shipped	3 days	Mon 3/24/14	Wed 3/26/14	Pearson
1106	Non-secure Materials in District	0 days	Wed 3/26/14	Wed 3/26/14	Pearson
1107	Secure Materials Packaged	15 days	Mon 3/3/14	Fri 3/21/14	Pearson
1108	Secure Materials Shipped	3 days	Mon 3/24/14	Wed 3/26/14	Pearson
1109	Secure Materials in District	0 days	Wed 3/26/14	Wed 3/26/14	Pearson
1110	Test Administration	15 days	Mon 4/14/14	Fri 5/2/14	
1111	Operational Test Administration Window - Reading, Math	15 days	Mon 4/14/14	Fri 5/2/14	
1112	Operational On-line Test Administration Window - Science	15 days	Mon 4/14/14	Fri 5/2/14	

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
1113	On-line Field Test Administration - Writing	15 days	Mon 4/14/14	Fri 5/2/14	
1114	Material Return and Verification	353 days	Tue 4/22/14	Mon 8/31/15	
1115	To Be Scored Materials Return EARLY Shipment	0 days	Tue 4/22/14	Tue 4/22/14	CO Districts
1116	To Be Scored Materials Return Shipment	0 days	Tue 5/6/14	Tue 5/6/14	CO Districts
1117	Not To Be Scored Materials Return Shipment	0 days	Fri 5/9/14	Fri 5/9/14	CO Districts
1118	Non-scored Materials Destruction	0 days	Mon 3/2/15	Mon 3/2/15	Pearson
1119	Scored Materials Destruction	0 days	Mon 8/31/15	Mon 8/31/15	Pearson
1120	Secure Materials Verification – Initial Report	0 days	Fri 5/23/14	Fri 5/23/14	Pearson
1121	Secure Materials Verification – Weekly Report	0 days	Fri 5/30/14	Fri 5/30/14	Pearson
1122	Secure Materials Verification – Final Report	0 days	Fri 6/6/14	Fri 6/6/14	Pearson
1123	Test Monitoring	212 days	Tue 7/2/13	Fri 5/2/14	
1124	Test Monitoring Protocol review rounds	60 days	Tue 7/2/13	Wed 9/25/13	Pearson
1125	Test Monitoring Protocol – CDE Review Final	5 days	Thu 9/26/13	Wed 10/2/13	CDE
126	Test Monitoring Sites Selected	0 days	Wed 1/15/14	Wed 1/15/14	Pearson
1127	Test Monitoring Sites Notified – TBD if needed	0 days	Fri 2/14/14	Fri 2/14/14	Pearson
1128	Test Monitoring	15 days	Mon 4/14/14	Fri 5/2/14	Pearson
1129	Web-Based Online Test Delivery System	172 days	Tue 7/2/13	Mon 3/10/14	
1130	Online Readiness Assessment	20 days	Tue 9/17/13	Tue 10/15/13	
1131	Conduct the Online Readiness Assessment	5 days	Tue 9/17/13	Mon 9/23/13	Pearson
1132	Online Readiness Assessment Results	5 days	Tue 9/24/13	Mon 9/30/13	Pearson
1133	Infrastructure Plan - Final	10 days	Tue 10/1/13	Tue 10/15/13	Pearson
1134	Online Tutorials	172 days	Tue 7/2/13	Mon 3/10/14	
1135	Online Tutorials review rounds	30 days	Thu 1/2/14	Wed 2/12/14	Pearson
1136	Online Tutorials – CDE Review Final	5 days	Thu 2/13/14	Wed 2/19/14	CDE
1137	Online Tutorials Available for District Use	0 days	Mon 3/10/14	Mon 3/10/14	Pearson
1138	Online Accommodations Functionality document review rounds	60 days	Tue 7/2/13	Wed 9/25/13	Pearson
1139	Online Accommodations Functionality – CDE Review Final	5 days	Thu 9/26/13	Wed 10/2/13	CDE
1140	Online Test Delivery	153 days	Tue 7/2/13	Mon 2/10/14	
1141	Online Test Delivery System Demonstration	0 days	Thu 8/1/13	Thu 8/1/13	Pearson
1142	Online Test Delivery System Testing	80 days	Thu 8/1/13	Fri 11/22/13	Pearson
1143	Online Test Delivery System Available for District Installation/Download	0 days	Fri 11/22/13	Fri 11/22/13	Pearson
1144	Forms Loaded in Online Test Delivery System	10 days	Tue 7/2/13	Tue 7/16/13	Pearson
1145	Mitigation and Contingency Plans - Final	30 days	Tue 7/2/13	Tue 8/13/13	Pearson
1146	Establish Unique Log-in ID and Passwords (CDE staff, technology directors, DACs, SACs, test proctors, students)	5 days	Mon 2/3/14	Fri 2/7/14	Pearson
1147	Distribute Unique Log-in ID and Passowrds (CDE staff, technology directors, DACs, SACs, test proctors, students)	1 day	Mon 2/10/14	Mon 2/10/14	Pearson
1148	Scanning and Scoring	251 days	Tue 7/2/13	Thu 6/26/14	
1149	Anchor Validation (spring 2013 Field Test)	83 days	Mon 8/19/13	Tue 12/17/13	
1150	Recruit Anchor Validation Participants	20 days	Mon 8/19/13	Mon 9/16/13	Pearson
1151	Anchor Validation Meeting	3 days	Tue 10/1/13	Thu 10/3/13	Pearson
1152	Scoring Decision Guide review rounds	45 days	Fri 10/4/13	Tue 12/10/13	Pearson
1153	Scoring Decision Guide – CDE Review Final	5 days	Wed 12/11/13	Tue 12/17/13	CDE
1154	Scoring Prcocesses	251 days	Tue 7/2/13	Thu 6/26/14	
1155	Scanning Specifications review rounds	20 days	Tue 7/2/13	Tue 7/30/13	Pearson
1156	Scanning Specifications – CDE Review Final	5 days	Wed 7/31/13	Tue 8/6/13	CDE
1157	Materials Scanned	10 days	Tue 4/29/14	Mon 5/12/14	Pearson
1158	Key Verification – CDE Review	2 days	Fri 5/2/14	Mon 5/5/14	CDE
1159	Alerts Resolved and Clean Post	10 days	Tue 4/29/14	Mon 5/12/14	Pearson
1160	Operational Scoring Window	7 days	Mon 5/5/14	Tue 5/13/14	Pearson
1161	Rangefinding	29 days	Mon 4/21/14	Thu 5/29/14	
1162	Recruit Rangefinding Participants	20 days	Mon 4/21/14	Fri 5/16/14	Pearson
1163	Rangefinding Meeting	3 days	Tue 5/27/14	Thu 5/29/14	Pearson
1164	Scoring Staff Requirements Established	0 days	Tue 7/2/13	Tue 7/2/13	Pearson
1165	Scoring Staff Recruitment and Hiring	20 days	Tue 4/1/14	Mon 4/28/14	Pearson

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
1166	Scoring Training Materials review rounds	10 days	Fri 5/30/14	Thu 6/12/14	Pearson
1167	Scoring Training Materials – CDE Review Final	3 days	Fri 6/13/14	Tue 6/17/14	CDE
1168	Scoring Window	7 days	Wed 6/18/14	Thu 6/26/14	Pearson
1169	Scoring Site Scheduled Visit - CDE	2 days	Wed 6/18/14	Thu 6/19/14	CDE
1170	Reliability and Validity Scoring Specification/Procedures review rounds	30 days	Tue 7/2/13	Tue 8/13/13	Pearson
1171	Reliability and Validity Scoring Specification/Procedures - CDE Review Final	5 days	Wed 8/14/13	Tue 8/20/13	CDE
1172	Procedures for Unusual Responses - review rounds	30 days	Tue 7/2/13	Tue 8/13/13	Pearson
1173	Procedures for Unusual Responses - CDE Review Final	5 days	Wed 8/14/13	Tue 8/20/13	CDE
1174	Rescoring Specifications/Procedures review rounds	30 days	Tue 7/2/13	Tue 8/13/13	Pearson
1175	Rescoring Specifications/Procedures - CDE Review Final	5 days	Wed 8/14/13	Tue 8/20/13	CDE
1176	Reporting of Data Files and Assessment Results	285 days	Tue 7/2/13	Wed 8/13/14	
1177	Reporting Files - Specs	65 days	Tue 7/2/13	Wed 10/2/13	
1178	Reporting: Data File Layout review rounds	45 days	Tue 7/2/13	Wed 9/4/13	Pearson
1179	Reporting: Score Report Shells review rounds	60 days	Tue 7/2/13	Wed 9/25/13	Pearson
1180	Reporting: Individual Student Level File Layout - CDE Review Final	5 days	Thu 9/5/13	Wed 9/11/13	CDE
1181	Reporting: Individual Student Level Report Shells – CDE Review Final	5 days	Thu 9/26/13	Wed 10/2/13	CDE
1182	Reporting: State Level File Layouts – CDE Review Final	5 days	Thu 9/5/13	Wed 9/11/13	CDE
1183	Reporting: District Level File Layouts – CDE Review Final	5 days	Thu 9/5/13	Wed 9/11/13	CDE
1184	Reporting: District Level Report Shells – CDE Review Final	5 days	Thu 9/26/13	Wed 10/2/13	CDE
1185	Reporting: School Level File Layouts – CDE Review Final	5 days	Thu 9/5/13	Wed 9/11/13	CDE
1186	Reporting: School Level Report Shells – CDE Review Final	5 days	Thu 9/26/13	Wed 10/2/13	CDE
1187	Reports	67 days	Tue 5/13/14	Wed 8/13/14	
1188	Student Biographical Data Review Window	10 days	Tue 5/13/14	Mon 5/26/14	CO Districts
1189	Reporting: QC of Individual Student Level File – CDE Review	2 days	Mon 7/21/14	Tue 7/22/14	CDE
1190	Reporting: QC of Individual Student Level File – CDE Verification	0 days	Tue 7/22/14	Tue 7/22/14	CDE
1191	Reporting: Individual Student Level File Posted	0 days	Tue 7/22/14	Tue 7/22/14	Pearson
1192	Reporting: Individual Student Report Bellwethers	2 days	Mon 7/28/14	Tue 7/29/14	CDE
1193	Reporting: Individual Student Level File Electronic Reports Posted	0 days	Tue 7/29/14	Tue 7/29/14	Pearson
1194	Reporting: Individual Student Level Hard Copy Reports in District	0 days	Wed 8/13/14	Wed 8/13/14	Pearson
1195	State Level Files	8 days	Fri 7/11/14	Tue 7/22/14	
1196	Pearson updates scoring system and produces/verifies State Level File	6 days	Fri 7/11/14	Fri 7/18/14	Pearson
1197	Reporting: QC of State Level File(s) – CDE Review	2 days	Mon 7/21/14	Tue 7/22/14	CDE
1198	Reporting: QC of State Level File(s) – CDE Verification	0 days	Tue 7/22/14	Tue 7/22/14	CDE
1199	Reporting: State Level File(s) Posted	0 days	Tue 7/22/14	Tue 7/22/14	Pearson
1200	District Level Files	10 days	Mon 7/21/14	Fri 8/1/14	
1201	Reporting: QC of District Level File(s) – CDE Review	2 days	Mon 7/21/14	Tue 7/22/14	CDE
1202	Reporting: QC of District Level File(s) – CDE Verification	0 days	Tue 7/22/14	Tue 7/22/14	CDE
1203	Reporting: District Level File(s) Posted	0 days	Tue 7/22/14	Tue 7/22/14	Pearson
1204	Reporting: District Reports Bellwethers	2 days	Mon 7/28/14	Tue 7/29/14	CDE
1205	Reporting: District Electronic Reports Posted	0 days	Fri 8/1/14	Fri 8/1/14	Pearson
1206	School Level Files	10 days	Mon 7/21/14	Fri 8/1/14	
1207	Reporting: QC of School Level File(s) – CDE Review	2 days	Mon 7/21/14	Tue 7/22/14	CDE
1208	Reporting: QC of School Level File(s) – CDE Verification	0 days	Tue 7/22/14	Tue 7/22/14	CDE
1209	Reporting: School Level File(s) Posted	0 days	Tue 7/22/14	Tue 7/22/14	Pearson
1210	Reporting: School Reports Bellwethers	2 days	Mon 7/28/14	Tue 7/29/14	CDE
1211	Reporting: School Electronic Reports Posted	0 days	Fri 8/1/14	Fri 8/1/14	Pearson
1212	Interpretive Guide	65 days	Thu 10/3/13	Wed 1/8/14	
1213	Interpretive Guide review rounds	60 days	Thu 10/3/13	Tue 12/31/13	Pearson
1214	Assessment Interpretive Guide – Review Final	5 days	Thu 1/2/14	Wed 1/8/14	CDE
1215	Assessment Interpretive Guide Posted	0 days	Wed 1/8/14	Wed 1/8/14	Pearson
1216	Psychometric, Research, and Technical Activities	286 days	Tue 7/2/13	Fri 8/15/14	
1217	Field Test and Operational Analysis	248 days	Tue 7/2/13	Mon 6/23/14	
1218	Field Test- Sampling Design	60 days	Tue 7/2/13	Wed 9/25/13	Pearson

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
1219	Psychometric Analysis of Field Test	30 days	Tue 5/13/14	Mon 6/23/14	Pearson
1220	Operational Analysis	10 days	Tue 5/13/14	Mon 5/26/14	Pearson
1221	Vertical Scale Presentation to TAC 1 (Reading/Math)	2 days	Tue 12/3/13	Wed 12/4/13	Pearson
1222	Vertical Scale Decision - Final (Reading/Math)	0 days	Thu 5/1/14	Thu 5/1/14	Pearson
1223	Standard Setting Tasks	156 days	Tue 12/3/13	Thu 7/10/14	
1224	Standard Setting Presentation to TAC 1 (Reading/Math/Science)	2 days	Tue 12/3/13	Wed 12/4/13	Pearson
1225	Standard Setting Procedure Decision review rounds	45 days	Mon 3/3/14	Fri 5/2/14	Pearson
1226	Standard Setting Procedure Decision - Final	0 days	Fri 5/2/14	Fri 5/2/14	Pearson
1227	Standard Setting Material review rounds	15 days	Tue 5/13/14	Mon 6/2/14	Pearson
1228	Standard Setting Material CDE Review Final	5 days	Tue 6/3/14	Mon 6/9/14	CDE
1229	Recruit Standard Setting Participants	20 days	Mon 5/12/14	Fri 6/6/14	Pearson
1230	Standard Setting	3 days	Tue 6/10/14	Thu 6/12/14	Pearson
1231	Standard Setting Validation	3 days	Tue 6/10/14	Thu 6/12/14	Pearson
1232	CDE approval of Standard Setting Results -- approval to proceed with reporting	20 days	Fri 6/13/14	Thu 7/10/14	CDE
1233	Equating	107 days	Tue 7/2/14	Wed 12/4/13	
1234	Linking and Equating Presentation to TAC 1 (Reading/Math/Science)	2 days	Tue 12/3/13	Wed 12/4/13	Pearson
1235	Alignment Studies (Reading/Math/Science)	20 days	Tue 7/2/13	Tue 7/30/13	Pearson
1236	TAC Meetings	107 days	Tue 9/3/13	Wed 2/5/14	
1237	TAC Meeting 1	2 days	Tue 9/3/13	Wed 9/4/13	
1238	TAC Meeting 2	2 days	Tue 12/3/13	Wed 12/4/13	
1239	TAC Meeting 3	2 days	Tue 2/4/14	Wed 2/5/14	
1240	Technical Reports	244 days	Fri 8/30/13	Fri 8/15/14	
1241	Technical Report – Final version to CDE	0 days	Fri 8/15/14	Fri 8/15/14	Pearson
1242	Irregularity and Data Forensic Report	10 days	Tue 5/13/14	Mon 5/26/14	Pearson
1243	Final Forensic Report from Final Results	0 days	Fri 8/30/13	Fri 8/30/13	
1244					
1245	ePATs with Accoms (for Spring 2014--based on ePATs from Fall 2013)	1 day	Tue 7/2/13	Tue 7/2/13	
1246	**Master Rollon Schedule Tasks - CoAlt**	**93 days**	**Tue 5/28/13**	**Mon 10/7/13**	
1247	CR CoAlt Fall 2013	93 days	Tue 5/28/13	Mon 10/7/13	
1248	Prod Order Import	0 days	Mon 9/30/13	Mon 9/30/13	Stoplight
1249	Upload Transportation File	0 days	Tue 10/1/13	Tue 10/1/13	Stoplight
1250	Print Personalized	0 days	Tue 10/1/13	Tue 10/1/13	Stoplight
1251	Final Pack Start	0 days	Wed 10/2/13	Wed 10/2/13	Stoplight
1252	DID (No Earlier Than)	0 days	Tue 10/1/13	Tue 10/1/13	Stoplight
1253	DID (No Later Than)	0 days	Mon 10/7/13	Mon 10/7/13	Stoplight
1254	Pre Sales Order (PSO) Rules Baselined	0 days	Wed 8/7/13	Wed 8/7/13	Stoplight
1255	P&D CRQ Baselined	0 days	Tue 5/28/13	Tue 5/28/13	Stoplight
1256	AV Sign-off of Packaging & Distribution Complete	0 days	Thu 9/12/13	Thu 9/12/13	Stoplight
1257	Upload Final Quantities	0 days	Wed 7/24/13	Wed 7/24/13	Stoplight

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
0	**CO Summative - FY2015**	**587 days**	**Mon 6/2/14**	**Wed 8/31/16**	
1	**START**	**587 days**	**Mon 6/2/14**	**Wed 8/31/16**	
2	**General**	**5 days**	**Tue 7/1/14**	**Mon 7/7/14**	
3	Security Plan updated and rebaselined	5 days	Tue 7/1/14	Mon 7/7/14	Pearson
4	**Program Management**	**304 days**	**Tue 7/1/14**	**Mon 8/31/15**	
5	**Project Schedule**	**9 days**	**Tue 7/1/14**	**Fri 7/11/14**	
6	Draft Project Schedule Created	4 days	Tue 7/1/14	Fri 7/4/14	Pearson/ETS
7	Project Schedule - CDE Review	3 days	Mon 7/7/14	Wed 7/9/14	CDE
8	Project Schedule - CDE and Pearson Joint Review	1 day	Thu 7/10/14	Thu 7/10/14	Pearson/ETS/CDE
9	Project Schedule Updated and Baselined	1 day	Fri 7/11/14	Fri 7/11/14	Pearson
10	**Project Meetings**	**232 days**	**Tue 7/1/14**	**Wed 5/20/15**	
11	**Project Meeting 1**	**12 days**	**Tue 7/1/14**	**Wed 7/16/14**	
12	Agenda Drafted and Delivered to CDE	2 days	Tue 7/1/14	Wed 7/2/14	Pearson
13	Meeting held (Denver, CO)	2 days	Tue 7/8/14	Wed 7/9/14	
14	Meeting Minutes Distributed	5 days	Thu 7/10/14	Wed 7/16/14	Pearson
15	**Project Meeting 2**	**13 days**	**Mon 9/1/14**	**Wed 9/17/14**	
16	Agenda Drafted and Delivered to CDE	2 days	Mon 9/1/14	Tue 9/2/14	Pearson
17	Meeting held (Denver, CO)	2 days	Tue 9/9/14	Wed 9/10/14	
18	Meeting Minutes Distributed	5 days	Thu 9/11/14	Wed 9/17/14	Pearson
19	**Project Meeting 3 - In person**	**13 days**	**Mon 11/3/14**	**Wed 11/19/14**	
20	Agenda Drafted and Delivered to CDE	2 days	Mon 11/3/14	Tue 11/4/14	Pearson
21	Meeting held (San Antonio, TX)	2 days	Tue 11/11/14	Wed 11/12/14	
22	Meeting Minutes Distributed	5 days	Thu 11/13/14	Wed 11/19/14	Pearson
23	**Project Meeting 4**	**14 days**	**Fri 1/2/15**	**Wed 1/21/15**	
24	Agenda Drafted and Delivered to CDE	2 days	Fri 1/2/15	Mon 1/5/15	Pearson
25	Meeting held (Denver, CO)	2 days	Tue 1/13/15	Wed 1/14/15	
26	Meeting Minutes Distributed	5 days	Thu 1/15/15	Wed 1/21/15	Pearson
27	**Project Meeting 5**	**13 days**	**Mon 3/2/15**	**Wed 3/18/15**	
28	Agenda Drafted and Delivered to CDE	2 days	Mon 3/2/15	Tue 3/3/15	Pearson
29	Meeting held (Denver, CO)	2 days	Tue 3/10/15	Wed 3/11/15	
30	Meeting Minutes Distributed	5 days	Thu 3/12/15	Wed 3/18/15	Pearson
31	**Project Meeting 6 - In person**	**14 days**	**Fri 5/1/15**	**Wed 5/20/15**	
32	Agenda Drafted and Delivered to CDE	2 days	Fri 5/1/15	Mon 5/4/15	Pearson
33	Meeting held (San Antonio, TX)	2 days	Tue 5/12/15	Wed 5/13/15	
34	Meeting Minutes Distributed	5 days	Thu 5/14/15	Wed 5/20/15	Pearson
35	**Monthy Reports**	**239 days**	**Tue 8/5/14**	**Mon 7/6/15**	
36	Jul	0 days	Tue 8/5/14	Tue 8/5/14	Pearson
37	Aug	0 days	Wed 9/3/14	Wed 9/3/14	Pearson
38	Sep	0 days	Fri 10/3/14	Fri 10/3/14	Pearson
39	Oct	0 days	Wed 11/5/14	Wed 11/5/14	Pearson
40	Nov	0 days	Wed 12/3/14	Wed 12/3/14	Pearson
41	Dec	0 days	Tue 1/6/15	Tue 1/6/15	Pearson
42	Jan	0 days	Wed 2/4/15	Wed 2/4/15	Pearson
43	Feb	0 days	Wed 3/4/15	Wed 3/4/15	Pearson
44	Mar	0 days	Fri 4/3/15	Fri 4/3/15	Pearson
45	Apr	0 days	Tue 5/5/15	Tue 5/5/15	Pearson
46	May	0 days	Wed 6/3/15	Wed 6/3/15	Pearson

ID	Task Name	Duration	Start	Finish	Resource Names
					Colorado Summative Schedule - FY2015
47	Jun	0 days	Mon 7/6/15	Mon 7/6/15	Pearson
48	**DAC**	**108 days**	**Tue 10/21/14**	**Thu 3/19/15**	
49	DAC Academy	2 days	Wed 2/18/15	Thu 2/19/15	Pearson
50	DAC Management 1	2 days	Tue 10/21/14	Wed 10/22/14	Pearson
51	DAC Management 2	2 days	Wed 3/18/15	Thu 3/19/15	Pearson
52	**Program Improvement**	**224 days**	**Fri 9/12/14**	**Wed 7/22/15**	
53	Program Improvement Plan - Development	15 days	Wed 12/3/14	Tue 12/23/14	Pearson
54	Program Improvement Plan - Production	15 days	Mon 1/12/15	Fri 1/30/15	Pearson
55	Program Improvement Plan - Shipping and Receipt	15 days	Thu 3/26/15	Wed 4/15/15	Pearson
56	Program Improvement Plan - Administration	15 days	Mon 5/4/15	Fri 5/22/15	Pearson
57	Program Improvement Plan - Scanning	15 days	Thu 5/21/15	Wed 6/10/15	Pearson
58	Program Improvement Plan - Scoring	15 days	Fri 6/26/15	Thu 7/16/15	Pearson
59	Program Improvement Plan - Data Processing	15 days	Tue 6/30/15	Mon 7/20/15	Pearson
60	Program Improvement Plan - Reporting and Psychometrics	15 days	Thu 7/2/15	Wed 7/22/15	Pearson
61	Program Improvement Plan - Meetings	15 days	Fri 9/12/14	Thu 10/2/14	Pearson
62	**Invoices**	**239 days**	**Tue 9/30/14**	**Mon 8/31/15**	
63	Invoice Q1	0 days	Tue 9/30/14	Tue 9/30/14	Pearson
64	Invoice Q2	0 days	Wed 12/31/14	Wed 12/31/14	Pearson
65	Invoice Q3	0 days	Tue 3/31/15	Tue 3/31/15	Pearson
66	Invoice Q4	0 days	Mon 6/15/15	Mon 6/15/15	Pearson
67	Invoice - "tail"	0 days	Mon 8/31/15	Mon 8/31/15	Pearson
68	**Assessment Development**	**309 days**	**Mon 6/2/14**	**Thu 8/6/15**	
69	**Documents - Development Specs**	**0 days**	**Tue 7/1/14**	**Tue 7/1/14**	
70	Eligible Content Document - Final	0 days	Tue 7/1/14	Tue 7/1/14	Content
71	Claims Document - Final	0 days	Tue 7/1/14	Tue 7/1/14	Content
72	Reporting Categories Document - Final	0 days	Tue 7/1/14	Tue 7/1/14	Content
73	Assessment Framework - Final	0 days	Tue 7/1/14	Tue 7/1/14	Content
74	Performance Level Descriptors – General - Final	0 days	Tue 7/1/14	Tue 7/1/14	Content
75	Performance Level Descriptors – Grade Level Specific - Final	0 days	Tue 7/1/14	Tue 7/1/14	Content
76	Test Blueprints/Specifications - Final	0 days	Tue 7/1/14	Tue 7/1/14	Content
77	**Style Guide**	**30 days**	**Tue 7/1/14**	**Mon 8/11/14**	
78	Colorado Style Guide - Draft	30 days	Tue 7/1/14	Mon 8/11/14	Content
79	Colorado Style Guide - Final for year	0 days	Tue 7/1/14	Tue 7/1/14	Content
80	**PE Stimuli and Storyboards**	**119 days**	**Mon 9/15/14**	**Thu 2/26/15**	
81	Recruit PE Stimuli and Storyboard Reviewers	25 days	Mon 1/5/15	Fri 2/6/15	Pearson
82	PE Stimuli and Storyboard Develoment	81 days	Mon 9/15/14	Mon 1/5/15	Content
83	PE Stimuli and Storyboard Selection - CDE Review	10 days	Tue 1/6/15	Mon 1/19/15	CDE
84	Prepare PE Stimuli and Storyboard Review Training Meeting materials	5 days	Tue 1/20/15	Mon 1/26/15	Content
85	PE Stimuli and Storyboard Review Training Meeting Materials- CDE Review	5 days	Tue 1/27/15	Mon 2/2/15	CDE
86	Edit and ship materials after CDE review	10 days	Tue 2/3/15	Mon 2/16/15	Content
87	PE Stimuli and Storyboard Review (Combined with another meeting)	3 days	Tue 2/17/15	Thu 2/19/15	Content
88	Content sends final results of PE Stimuli and Storyboard Review meeting to CDE	5 days	Fri 2/20/15	Thu 2/26/15	Content
89	**Item Development (2016 Field Test)**	**288 days**	**Tue 7/1/14**	**Thu 8/6/15**	
90	Item Writer Recruiting	25 days	Mon 2/2/15	Fri 3/6/15	Pearson
91	Develop Training Materials and Item Development Plans	5 days	Wed 2/25/15	Tue 3/3/15	Content
92	Item Development Meeting 1 Materials – CDE Review	5 days	Wed 3/4/15	Tue 3/10/15	CDE
93	Edit and ship materials after CDE review	9 days	Wed 3/11/15	Mon 3/23/15	Content

					Colorado Summative Schedule - FY2015	
ID	Task Name	Duration	Start	Finish	Resource Names	
94	Item Development Meeting 1	3 days	Tue 3/24/15	Thu 3/26/15	Content	
95	Content provides developers feedback	39 days	Fri 3/27/15	Wed 5/20/15	Content	
96	Content develops training materials and item development plans (meeting 2)	5 days	Tue 7/1/14	Mon 7/7/14	Content	
97	Item Writer Recruiting	25 days	Fri 5/1/15	Thu 6/4/15	Pearson	
98	Item Development Meeting 2 Materials – CDE Review	3 days	Thu 5/28/15	Mon 6/1/15	CDE	
99	Edit and ship materials after CDE review	10 days	Tue 6/2/15	Mon 6/15/15	Content	
100	Item Development Meeting 2	3 days	Tue 6/16/15	Thu 6/18/15	Content	
101	Content provides developers feedback	10 days	Fri 6/19/15	Thu 7/2/15	Content	
102	Content conducts internal Content and Editorial Reviews	20 days	Fri 7/3/15	Thu 7/30/15	Content	
103	Item Review – CDE Review	5 days	Fri 7/31/15	Thu 8/6/15	CDE	
104	**Content and Bias Review - Science, Social Studies**	**61 days**	**Thu 6/19/14**	**Thu 9/11/14**		
105	Item Review – CDE Review (newly written items)	5 days	Tue 7/1/14	Mon 7/7/14	CDE	
106	Recruit Content Review Participants	10 days	Tue 7/1/14	Mon 7/14/14	Pearson	
107	Content Creates training materials for Content and PLD Meetings	10 days	Thu 6/19/14	Wed 7/2/14	Content	
108	Content and PLD Meeting training Materials – CDE Review	5 days	Thu 7/3/14	Wed 7/9/14	CDE	
109	Edit and ship materials after CDE review	13 days	Thu 7/10/14	Mon 7/28/14	Content	
110	Content and Bias Meeting	3 days	Tue 7/29/14	Thu 7/31/14	Content	
111	Content implements edits suggested by committee	30 days	Fri 8/1/14	Thu 9/11/14	Content	
112	Content sends final results of Content and Bias Sensitivity Review meeting	1 day	Thu 8/7/14	Thu 8/7/14	Content	
113	**Data Review (for 2015 Operational)**	**176 days**	**Mon 6/2/14**	**Mon 2/2/15**		
114	**Elementary/Middle**	**32 days**	**Mon 6/2/14**	**Tue 7/15/14**		
115	Recruit Data Review Participants	25 days	Mon 6/2/14	Fri 7/4/14	Pearson	
116	Content Creates Data Review Training Materials	5 days	Wed 6/11/14	Tue 6/17/14	Content	
117	Produce Data Review Training Materials – CDE Review	4 days	Wed 6/18/14	Mon 6/23/14	CDE	
118	Edit and ship materials after CDE review	10 days	Tue 6/24/14	Mon 7/7/14	Content	
119	Conduct Data Review meeting	1 day	Tue 7/8/14	Tue 7/8/14	Content	
120	Content implements edits suggested by committee	10 days	Tue 7/1/14	Mon 7/14/14	Content	
121	Content provides final results of Data Review Meetings	1 day	Tue 7/15/14	Tue 7/15/14	Content	
122	**High School**	**46 days**	**Mon 12/1/14**	**Mon 2/2/15**		
123	Recruit Data Review Participants	25 days	Mon 12/1/14	Fri 1/2/15		
124	Content Creates Data Review Training Materials	5 days	Mon 12/22/14	Fri 12/26/14	Pearson	
125	Produce Data Review Training Materials – CDE Review	4 days	Mon 12/29/14	Thu 1/1/15	CDE	
126	Edit and ship materials after CDE review	10 days	Fri 1/2/15	Thu 1/15/15	Content	
127	Conduct Data Review meeting	1 day	Fri 1/16/15	Fri 1/16/15	Content	
128	Content implements edits suggested by committee	10 days	Mon 1/19/15	Fri 1/30/15	Content	
129	Content provides final results of Data Review Meetings	1 day	Mon 2/2/15	Mon 2/2/15	Content	
130	**Form Development**	**254 days**	**Tue 7/1/14**	**Fri 6/19/15**		
131	**Fall 2014 - High School**	**25 days**	**Tue 7/1/14**	**Mon 8/4/14**		
132	**Test/Ancillary Material - Development**	**25 days**	**Tue 7/1/14**	**Mon 8/4/14**		
133	District and School Assessment Coordinator review rounds	20 days	Tue 7/1/14	Mon 7/28/14	Pearson	
134	Document Development: District and School Assessment Coordinators Manual – CDE Review Fina	5 days	Tue 7/29/14	Mon 8/4/14	CDE	
135	Proctors Manual review rounds	20 days	Tue 7/1/14	Mon 7/28/14	Pearson	
136	Document Development: Proctors Manual – CDE Review Final	5 days	Tue 7/29/14	Mon 8/4/14	CDE	
137	Certification Forms review rounds	20 days	Tue 7/1/14	Mon 7/28/14	Pearson	
138	Document Development: Certification Forms – CDE Review Final	5 days	Tue 7/29/14	Mon 8/4/14	CDE	
139	Ancillary Materials (Manipulatives) review rounds	20 days	Tue 7/1/14	Mon 7/28/14	Pearson	
140	Document Development: Ancillary Materials – CDE Review Final	5 days	Tue 7/29/14	Mon 8/4/14	CDE	

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
141	Field Testing Plan	20 days	Tue 7/1/14	Mon 7/28/14	Pearson
142	**Spring 2015 - Elementary and Middle**	**124 days**	**Tue 7/1/14**	**Fri 12/19/14**	
143	**Core Test Form Development (Science, Social Studies)**	**35 days**	**Wed 7/16/14**	**Tue 9/2/14**	
144	Content constructs forms	20 days	Wed 7/16/14	Tue 8/12/14	Content
145	CDE reviews forms	5 days	Wed 8/13/14	Tue 8/19/14	CDE
146	Content revises forms based on CDE review	5 days	Wed 8/20/14	Tue 8/26/14	Content
147	Core Test Form Development – CDE Review Final	5 days	Wed 8/27/14	Tue 9/2/14	CDE
148	Core Test Form Development – Final	0 days	Tue 9/2/14	Tue 9/2/14	CDE
149	**Embedded Field Test Form Development**	**65 days**	**Wed 9/3/14**	**Tue 12/2/14**	
150	Content constructs forms	50 days	Wed 9/3/14	Tue 11/11/14	Content
151	CDE reviews forms	5 days	Wed 11/12/14	Tue 11/18/14	CDE
152	Content revises forms based on CDE review	5 days	Wed 11/19/14	Tue 11/25/14	Content
153	Embedded Field Test Form Development – Final	5 days	Wed 11/26/14	Tue 12/2/14	CDE
154	Content sends Production ready files to Pearson (Files to Print)	0 days	Tue 12/2/14	Tue 12/2/14	Content
155	**Special Populations**	**121 days**	**Tue 7/1/14**	**Tue 12/16/14**	
156	Accommodations Procedures Manual review rounds	60 days	Tue 7/1/14	Mon 9/22/14	Pearson
157	Accommodations Procedures Manual - CDE Review Final	5 days	Tue 9/23/14	Mon 9/29/14	CDE
158	**Paper and Pencil Accommodated Versions**	**25 days**	**Wed 9/3/14**	**Tue 10/7/14**	
159	Paper and Pencil Accommodated Versions Development	20 days	Wed 9/3/14	Tue 9/30/14	Content
160	Accommodated Materials: Paper and Pencil Accommodated Forms - CDE Review Final	5 days	Wed 10/1/14	Tue 10/7/14	CDE
161	Content sends Production ready files to Pearson (Files to Print)	0 days	Tue 10/7/14	Tue 10/7/14	Content
162	**Large Print Test Form Development**	**45 days**	**Wed 10/8/14**	**Tue 12/9/14**	
163	Large Print Development	40 days	Wed 10/8/14	Tue 12/2/14	Content
164	Accommodated Materials: Large Print - CDE Review Final	5 days	Wed 12/3/14	Tue 12/9/14	CDE
165	Content sends Production ready files to Pearson (Files to Print)	0 days	Tue 12/9/14	Tue 12/9/14	Content
166	**Braille Test Form Development**	**75 days**	**Wed 9/3/14**	**Tue 12/16/14**	
167	Content performs accessibilty review of approved forms	10 days	Wed 9/3/14	Tue 9/16/14	Content
168	Braille Development	50 days	Wed 9/17/14	Tue 11/25/14	Braille Vendor
169	Content prepares and ships materials for Braille forms review	5 days	Wed 11/26/14	Tue 12/2/14	Content
170	Braille Forms Review Meeting	5 days	Wed 12/3/14	Tue 12/9/14	Content
171	Accommodated Materials: Braille Review	0 days	Tue 12/9/14	Tue 12/9/14	CDE
172	Content reconciles edits and sends Braille summary meeting results to CDE	5 days	Wed 12/10/14	Tue 12/16/14	Content
173	Content sends Production ready files to Pearson (Files to Print)	0 days	Tue 12/16/14	Tue 12/16/14	Content
174	**English and Spanish Oral Scripts (Online and Paper/Pencil)**	**50 days**	**Wed 9/3/14**	**Tue 11/11/14**	
175	Content constructs scripts	30 days	Wed 9/3/14	Tue 10/14/14	Content
176	CDE reviews scripts	5 days	Wed 10/15/14	Tue 10/21/14	CDE
177	Content revises scripts based on CDE review	5 days	Wed 10/22/14	Tue 10/28/14	Content
178	Accommodated Materials: English Oral Scripts – CDE Review Final	5 days	Wed 10/29/14	Tue 11/4/14	CDE
179	Accommodated Materials: Spanish Oral Scripts – CDE Review Final	5 days	Wed 11/5/14	Tue 11/11/14	CDE
180	Content sends Production ready files to Pearson (files to print)	0 days	Tue 11/11/14	Tue 11/11/14	Content
181	**Teacher Read Directions**	**50 days**	**Wed 9/3/14**	**Tue 11/11/14**	
182	Content constructs directions	35 days	Wed 9/3/14	Tue 10/21/14	Content
183	CDE reviews directions	5 days	Wed 10/22/14	Tue 10/28/14	CDE
184	Content revises forms based on CDE review	5 days	Wed 10/29/14	Tue 11/4/14	Content
185	Accommodated Materials: Teacher Read Directions – CDE Review Final	5 days	Wed 11/5/14	Tue 11/11/14	CDE
186	Content sends Production ready files to Pearson	0 days	Tue 11/11/14	Tue 11/11/14	Content
187	**Certification for District Translators**	**65 days**	**Tue 7/1/14**	**Mon 9/29/14**	

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
188	Procedures documente produced	60 days	Tue 7/1/14	Mon 9/22/14	Pearson
189	Procedures for Certification for District Translators – CDE Review Final	5 days	Tue 9/23/14	Mon 9/29/14	CDE
190	**Test/Ancillary Material - Development**	**124 days**	**Tue 7/1/14**	**Fri 12/19/14**	
191	District and School Assessment Coordinator review rounds	20 days	Tue 7/1/14	Mon 7/28/14	Pearson
192	Document Development: District and School Assessment Coordinators Manual – CDE Review Fina	5 days	Tue 7/29/14	Mon 8/4/14	CDE
193	Proctors Manual review rounds	20 days	Mon 11/17/14	Fri 12/12/14	Pearson
194	Document Development: Proctors Manual – CDE Review Final	5 days	Mon 12/15/14	Fri 12/19/14	CDE
195	Certification Forms review rounds	20 days	Tue 7/1/14	Mon 7/28/14	Pearson
196	Document Development: Certification Forms – CDE Review Final	5 days	Tue 7/29/14	Mon 8/4/14	CDE
197	Answer Document review rounds	20 days	Tue 7/1/14	Mon 7/28/14	Pearson
198	Document Development: Answer Document Layout - CDE Review Final	5 days	Tue 7/29/14	Mon 8/4/14	CDE
199	Document Development: Test Bookl Content/Answer Documents – CDE Review Final	5 days	Wed 12/10/14	Tue 12/16/14	CDE
200	Ancillary Materials (Manipulatives) review rounds	60 days	Tue 7/1/14	Mon 9/22/14	Pearson
201	Document Development: Ancillary Materials – CDE Review Final	5 days	Tue 9/23/14	Mon 9/29/14	CDE
202	**Fall 2015 - High School (must occur in FY15)**	**254 days**	**Tue 7/1/14**	**Fri 6/19/15**	
203	**Core Test Form Development (Science, Social Studies)**	**35 days**	**Mon 1/19/15**	**Fri 3/6/15**	
204	Content constructs forms	20 days	Mon 1/19/15	Fri 2/13/15	Content
205	CDE reviews forms	5 days	Mon 2/16/15	Fri 2/20/15	CDE
206	Content revises forms based on CDE review	5 days	Mon 2/23/15	Fri 2/27/15	Content
207	Core Test Form Development – CDE Review Final	5 days	Mon 3/2/15	Fri 3/6/15	CDE
208	Core Test Form Development – Final	0 days	Fri 3/6/15	Fri 3/6/15	CDE
209	**Embedded Field Test Form Development**	**45 days**	**Mon 3/9/15**	**Fri 5/8/15**	
210	Content constructs forms	30 days	Mon 3/9/15	Fri 4/17/15	Content
211	CDE reviews forms	5 days	Mon 4/20/15	Fri 4/24/15	CDE
212	Content revises forms based on CDE review	5 days	Mon 4/27/15	Fri 5/1/15	Content
213	Embedded Field Test Form Development – Final	5 days	Mon 5/4/15	Fri 5/8/15	CDE
214	Content sends Production ready files to Pearson (Files to Print)	0 days	Fri 5/8/15	Fri 5/8/15	Content
215	**Special Populations**	**254 days**	**Tue 7/1/14**	**Fri 6/19/15**	
216	Accommodations Procedures Manual review rounds	60 days	Tue 7/1/14	Mon 9/22/14	Pearson
217	Accommodations Procedures Manual - CDE Review Final	5 days	Tue 9/23/14	Mon 9/29/14	CDE
218	**Paper and Pencil Accommodated Versions**	**25 days**	**Mon 3/9/15**	**Fri 4/10/15**	
219	Paper and Pencil Accommodated Versions Development	20 days	Mon 3/9/15	Fri 4/3/15	Content
220	Accommodated Materials: Paper and Pencil Accommodated Forms - CDE Review Final	5 days	Mon 4/6/15	Fri 4/10/15	CDE
221	Content sends Production ready files to Pearson (Files to Print)	0 days	Fri 4/10/15	Fri 4/10/15	Content
222	**Large Print Test Form Development**	**45 days**	**Mon 4/13/15**	**Fri 6/12/15**	
223	Large Print Development	40 days	Mon 4/13/15	Fri 6/5/15	Content
224	Accommodated Materials: Large Print - CDE Review Final	5 days	Mon 6/8/15	Fri 6/12/15	CDE
225	Content sends Production ready files to Pearson (Files to Print)	0 days	Fri 6/12/15	Fri 6/12/15	Content
226	**Braille Test Form Development**	**75 days**	**Mon 3/9/15**	**Fri 6/19/15**	
227	Content performs accessibilty review of approved forms	10 days	Mon 3/9/15	Fri 3/20/15	Content
228	Braille Development	50 days	Mon 3/23/15	Fri 5/29/15	Braille Vendor
229	Content prepares and ships materials for Braille forms review	5 days	Mon 6/1/15	Fri 6/5/15	Content
230	Braille Forms Review Meeting	5 days	Mon 6/8/15	Fri 6/12/15	Content
231	Accommodated Materials: Braille Review	0 days	Fri 6/12/15	Fri 6/12/15	CDE
232	Content reconciles edits and sends Braille summary meeting results to CDE	5 days	Mon 6/15/15	Fri 6/19/15	Content
233	Content sends Production ready files to Pearson (Files to Print)	0 days	Fri 6/19/15	Fri 6/19/15	Content
234	**English and Spanish Oral Scripts (Online and Paper/Pencil)**	**50 days**	**Mon 3/9/15**	**Fri 5/15/15**	

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
235	Content constructs scripts	30 days	Mon 3/9/15	Fri 4/17/15	Content
236	CDE reviews scripts	5 days	Mon 4/20/15	Fri 4/24/15	CDE
237	Content revises scripts based on CDE review	5 days	Mon 4/27/15	Fri 5/1/15	Content
238	Accommodated Materials: English Oral Scripts – CDE Review Final	5 days	Mon 5/4/15	Fri 5/8/15	CDE
239	Accommodated Materials: Spanish Oral Scripts – CDE Review Final	5 days	Mon 5/11/15	Fri 5/15/15	CDE
240	Content sends Production ready files to Pearson (files to print)	0 days	Fri 5/15/15	Fri 5/15/15	Content
241	**Teacher Read Directions (Part of TAM)**	**50 days**	**Mon 3/9/15**	**Fri 5/15/15**	
242	Content constructs directions	35 days	Mon 3/9/15	Fri 4/24/15	Content
243	CDE reviews directions	5 days	Mon 4/27/15	Fri 5/1/15	CDE
244	Content revises forms based on CDE review	5 days	Mon 5/4/15	Fri 5/8/15	Content
245	Accommodated Materials: Teacher Read Directions – CDE Review Final	5 days	Mon 5/11/15	Fri 5/15/15	CDE
246	Content sends Production ready files to Pearson	0 days	Fri 5/15/15	Fri 5/15/15	Content
247	**Certification for District Translators**	**65 days**	**Tue 7/1/14**	**Mon 9/29/14**	
248	Procedures documente produced	60 days	Tue 7/1/14	Mon 9/22/14	Pearson
249	Procedures for Certification for District Translators – CDE Review Final	5 days	Tue 9/23/14	Mon 9/29/14	CDE
250	**Assessment Administration**	**566 days**	**Tue 7/1/14**	**Wed 8/31/16**	
251	**Fall 2014 - High School**	**566 days**	**Tue 7/1/14**	**Wed 8/31/16**	
252	**Orders for Materials**	**45 days**	**Mon 9/1/14**	**Fri 10/31/14**	
253	Materials Ordering System Operational	0 days	Mon 9/1/14	Mon 9/1/14	Pearson
254	Materials Ordering Window (SDU's)	10 days	Mon 9/1/14	Fri 9/12/14	Pearson
255	Online Rosters Generated	5 days	Mon 9/15/14	Fri 9/19/14	Pearson
256	Additional Materials Ordering Window	30 days	Mon 9/22/14	Fri 10/31/14	Pearson
257	**Test/Ancillary Material - Production**	**25 days**	**Tue 7/1/14**	**Mon 8/4/14**	
258	Proctors Manual Produced	15 days	Tue 7/1/14	Mon 7/21/14	Pearson
259	Test BooklContent/Answer Documents Produced	25 days	Tue 7/1/14	Mon 8/4/14	Pearson
260	Ancillaries Produced	15 days	Tue 7/1/14	Mon 7/21/14	Pearson
261	Accommodated Materials Produced	25 days	Tue 7/1/14	Mon 8/4/14	Pearson
262	Certification Forms Produced	5 days	Tue 7/1/14	Mon 7/7/14	Pearson
263	**Packaging and Delivery**	**72 days**	**Tue 7/1/14**	**Wed 10/8/14**	
264	Colorado Districts in Shipping System	0 days	Tue 7/1/14	Tue 7/1/14	Pearson
265	Packaging Specifications Finalized	0 days	Tue 7/1/14	Tue 7/1/14	Pearson
266	Non-secure Materials Packaged	10 days	Mon 9/22/14	Fri 10/3/14	Pearson
267	Non-secure Materials Shipped	3 days	Mon 10/6/14	Wed 10/8/14	Pearson
268	Non-secure Materials in District	0 days	Wed 10/8/14	Wed 10/8/14	Pearson
269	Secure Materials Packaged	10 days	Mon 9/22/14	Fri 10/3/14	Pearson
270	Secure Materials Shipped	3 days	Mon 10/6/14	Wed 10/8/14	Pearson
271	Secure Materials in District	0 days	Wed 10/8/14	Wed 10/8/14	Pearson
272	**Test Administration**	**15 days**	**Mon 10/27/14**	**Fri 11/14/14**	
273	Operational Test Administration Window - High School Science, Social Studies	15 days	Mon 10/27/14	Fri 11/14/14	
274	**Material Return and Verification**	**465 days**	**Tue 11/18/14**	**Wed 8/31/16**	
275	To Be Scored Materials Return Shipment	0 days	Tue 11/18/14	Tue 11/18/14	Pearson
276	Not To Be Scored Materials Return Shipment	0 days	Thu 11/20/14	Thu 11/20/14	Pearson
277	Non-scored Materials Destruction	0 days	Fri 11/20/15	Fri 11/20/15	Pearson
278	Scored Materials Destruction	0 days	Wed 8/31/16	Wed 8/31/16	Pearson
279	Secure Materials Verification – Initial Report	0 days	Thu 12/4/14	Thu 12/4/14	Pearson
280	Secure Materials Verification – Weekly Report	0 days	Thu 12/11/14	Thu 12/11/14	Pearson
281	Secure Materials Verification – Final Report	0 days	Thu 12/18/14	Thu 12/18/14	Pearson

ID	Task Name	Duration	Start	Finish	Resource Names
				Colorado Summative Schedule - FY2015	
282	**Test Monitoring**	**163 days**	**Tue 7/1/14**	**Fri 2/13/15**	
283	Test Monitoring Protocol review rounds	60 days	Tue 7/1/14	Mon 9/22/14	Pearson
284	Test Monitoring Protocol – CDE Review Final	5 days	Tue 9/23/14	Mon 9/29/14	CDE
285	Test Monitoring Sites Selected	0 days	Thu 1/15/15	Thu 1/15/15	Pearson
286	Test Monitoring Sites Notified – TBD if needed	0 days	Fri 2/13/15	Fri 2/13/15	Pearson
287	Test Monitoring	15 days	Mon 10/27/14	Fri 11/14/14	Pearson
288	**Spring 2015 - Elementary and Middle**	**566 days**	**Tue 7/1/14**	**Wed 8/31/16**	
289	**Orders for Materials**	**60 days**	**Mon 2/2/15**	**Fri 4/24/15**	
290	Pre-ID (State SDU) File Transfer	0 days	Mon 2/2/15	Mon 2/2/15	CDE
291	Materials Ordering System Operational	0 days	Mon 2/2/15	Mon 2/2/15	Pearson
292	Materials Ordering Window (SDU's)	20 days	Mon 2/2/15	Fri 2/27/15	Pearson
293	Online Rosters Generated	5 days	Mon 3/2/15	Fri 3/6/15	Pearson
294	Additional Materials Ordering Window	35 days	Mon 3/9/15	Fri 4/24/15	Pearson
295	**Test/Ancillary Material - Production**	**139 days**	**Tue 7/1/14**	**Fri 1/9/15**	
296	Proctors Manual Produced	15 days	Mon 12/22/14	Fri 1/9/15	Pearson
297	Test Book|Content/Answer Documents Produced	25 days	Wed 12/3/14	Tue 1/6/15	Pearson
298	Ancillaries Produced	15 days	Tue 9/30/14	Mon 10/20/14	Pearson
299	Accommodated Materials Produced	25 days	Tue 7/1/14	Mon 8/4/14	Pearson
300	Certification Forms Produced	5 days	Tue 8/5/14	Mon 8/11/14	Pearson
301	**Packaging and Delivery**	**59 days**	**Fri 1/2/15**	**Wed 3/25/15**	
302	Colorado Districts in Shipping System	0 days	Mon 2/2/15	Mon 2/2/15	Pearson
303	Packaging Specifications Finalized	0 days	Fri 1/2/15	Fri 1/2/15	Pearson
304	Non-secure Materials Packaged	10 days	Mon 3/9/15	Fri 3/20/15	Pearson
305	Non-secure Materials Shipped	3 days	Mon 3/23/15	Wed 3/25/15	Pearson
306	Non-secure Materials in District	0 days	Wed 3/25/15	Wed 3/25/15	Resource
307	Secure Materials Packaged	10 days	Mon 3/9/15	Fri 3/20/15	Pearson
308	Secure Materials Shipped	3 days	Mon 3/23/15	Wed 3/25/15	Pearson
309	Secure Materials in District	0 days	Wed 3/25/15	Wed 3/25/15	Pearson
310	**Test Administration**	**15 days**	**Mon 4/13/15**	**Fri 5/1/15**	
311	Operational Test Administration Window - ES/MS Science, Social Studies	15 days	Mon 4/13/15	Fri 5/1/15	
312	**Material Return and Verification**	**345 days**	**Tue 5/5/15**	**Wed 8/31/16**	
313	To Be Scored Materials Return Shipment	0 days	Tue 5/5/15	Tue 5/5/15	Pearson
314	Not To Be Scored Materials Return Shipment	0 days	Thu 5/7/15	Thu 5/7/15	Pearson
315	Non-scored Materials Destruction	0 days	Wed 3/2/16	Wed 3/2/16	Pearson
316	Scored Materials Destruction	0 days	Wed 8/31/16	Wed 8/31/16	Pearson
317	Secure Materials Verification – Initial Report	0 days	Thu 5/21/15	Thu 5/21/15	Pearson
318	Secure Materials Verification – Weekly Report	0 days	Thu 5/28/15	Thu 5/28/15	Pearson
319	Secure Materials Verification – Final Report	0 days	Thu 6/4/15	Thu 6/4/15	Pearson
320	**Test Monitoring**	**219 days**	**Tue 7/1/14**	**Fri 5/1/15**	
321	Test Monitoring Protocol review rounds	60 days	Tue 7/1/14	Mon 9/22/14	Pearson
322	Test Monitoring Protocol – CDE Review Final	5 days	Tue 9/23/14	Mon 9/29/14	CDE
323	Test Monitoring Sites Selected	0 days	Thu 1/15/15	Thu 1/15/15	Pearson
324	Test Monitoring Sites Notified – TBD if needed	0 days	Fri 2/13/15	Fri 2/13/15	Pearson
325	Test Monitoring	15 days	Mon 4/13/15	Fri 5/1/15	Pearson
326	**Web-Based Online Test Delivery System**	**202 days**	**Tue 7/1/14**	**Wed 4/8/15**	
327	**Fall 2014 - High School**	**82 days**	**Tue 7/1/14**	**Wed 10/22/14**	
328	**Online Readiness Assessment**	**20 days**	**Tue 7/1/14**	**Mon 7/28/14**	

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
329	Conduct the Online Readiness Assessment	5 days	Tue 7/1/14	Mon 7/7/14	Pearson
330	Online Readiness Assessment Results	5 days	Tue 7/8/14	Mon 7/14/14	Pearson
331	Infrastructure Plan - Final	10 days	Tue 7/15/14	Mon 7/28/14	Pearson
332	**Online Tutorials**	**35 days**	**Tue 7/1/14**	**Mon 8/18/14**	
333	Online Tutorials review rounds	30 days	Tue 7/1/14	Mon 8/11/14	Pearson
334	Online Tutorials – CDE Review Final	5 days	Tue 8/12/14	Mon 8/18/14	CDE
335	Online Tutorials Available for District Use	0 days	Tue 7/1/14	Tue 7/1/14	Pearson
336	Online Accommodations Functionality document review rounds	30 days	Tue 7/1/14	Mon 8/11/14	Pearson
337	Online Accommodations Functionality – CDE Review Final	5 days	Tue 8/12/14	Mon 8/18/14	CDE
338	**Online Test Delivery**	**82 days**	**Tue 7/1/14**	**Wed 10/22/14**	
339	Online Test Delivery System Demonstration	0 days	Tue 7/1/14	Tue 7/1/14	Pearson
340	Online Test Delivery System Testing	80 days	Tue 7/1/14	Mon 10/20/14	Pearson
341	Online Test Delivery System Available for District Installation/Download	0 days	Mon 10/20/14	Mon 10/20/14	Pearson
342	Forms Loaded in Online Test Delivery System	10 days	Thu 10/9/14	Wed 10/22/14	Pearson
343	Mitigation and Contingency Plans - Final	30 days	Tue 7/1/14	Mon 8/11/14	Pearson
344	Establish Unique Log-in ID and Passwords (CDE staff, technology directors, DACs, SACs, test proctors, students)	5 days	Mon 9/22/14	Fri 9/26/14	Pearson
345	Distribute Unique Log-in ID and Passowrds (CDE staff, technology directors, DACs, SACs, test proctors, students)	1 day	Mon 9/29/14	Mon 9/29/14	Pearson
346	**Spring 2015 - Elementary and Middle**	**202 days**	**Tue 7/1/14**	**Wed 4/8/15**	
347	**Online Readiness Assessment**	**20 days**	**Wed 9/17/14**	**Tue 10/14/14**	
348	Conduct the Online Readiness Assessment	5 days	Wed 9/17/14	Tue 9/23/14	Pearson
349	Online Readiness Assessment Results	5 days	Wed 9/24/14	Tue 9/30/14	Pearson
350	Infrastructure Plan - Final	10 days	Wed 10/1/14	Tue 10/14/14	Pearson
351	**Online Tutorials**	**179 days**	**Tue 7/1/14**	**Mon 3/9/15**	
352	Online Tutorials review rounds	30 days	Fri 1/2/15	Thu 2/12/15	Pearson
353	Online Tutorials – CDE Review Final	5 days	Fri 2/13/15	Thu 2/19/15	CDE
354	Online Tutorials Available for District Use	0 days	Mon 3/9/15	Mon 3/9/15	Pearson
355	Online Accommodations Functionality document review rounds	60 days	Tue 7/1/14	Mon 9/22/14	Pearson
356	Online Accommodations Functionality – CDE Review Final	5 days	Tue 9/23/14	Mon 9/29/14	CDE
357	**Online Test Delivery**	**202 days**	**Tue 7/1/14**	**Wed 4/8/15**	
358	Online Test Delivery System Demonstration	0 days	Fri 8/1/14	Fri 8/1/14	Pearson
359	Online Test Delivery System Testing	80 days	Fri 8/1/14	Thu 11/20/14	Pearson
360	Online Test Delivery System Available for District Installation/Download	0 days	Thu 11/20/14	Thu 11/20/14	Pearson
361	Forms Loaded in Online Test Delivery System	10 days	Thu 3/26/15	Wed 4/8/15	Pearson
362	Mitigation and Contingency Plans - Final	30 days	Tue 7/1/14	Mon 8/11/14	Pearson
363	Establish Unique Log-in ID and Passwords (CDE staff, technology directors, DACs, SACs, test proctors, students)	5 days	Mon 3/9/15	Fri 3/13/15	Pearson
364	Distribute Unique Log-in ID and Passowrds (CDE staff, technology directors, DACs, SACs, test proctors, students)	1 day	Mon 3/16/15	Mon 3/16/15	Pearson
365	**Scanning and Scoring**	**260 days**	**Tue 7/1/14**	**Mon 6/29/15**	
366	**Fall 2014 - High School**	**220 days**	**Tue 7/1/14**	**Mon 5/4/15**	
367	**Scoring Processes**	**220 days**	**Tue 7/1/14**	**Mon 5/4/15**	
368	Scanning Specifications review rounds	20 days	Tue 7/1/14	Mon 7/28/14	Pearson
369	Scanning Specifications – CDE Review Final	5 days	Tue 7/29/14	Mon 8/4/14	CDE
370	Materials Scanned	10 days	Wed 11/19/14	Tue 12/2/14	Pearson
371	Key Verification – CDE Review	2 days	Fri 5/1/15	Mon 5/4/15	CDE
372	Alerts Resolved and Clean Post	10 days	Wed 11/19/14	Tue 12/2/14	Pearson

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
373	Pearson Scoring System (ePEN) in Production	0 days	Fri 11/14/14	Fri 11/14/14	Pearson
374	**Operational Scoring**	**106 days**	**Tue 7/1/14**	**Tue 11/25/14**	
375	Scoring Staff Requirements Established	0 days	Tue 7/1/14	Tue 7/1/14	Pearson
376	Scoring Staff Recruitment and Hiring	20 days	Mon 10/27/14	Fri 11/21/14	Pearson
377	**Operational Scoring Training Materials**	**25 days**	**Mon 10/13/14**	**Fri 11/14/14**	
378	Pearson creates draft training materials	15 days	Mon 10/13/14	Fri 10/31/14	Pearson
379	CDE reviews/approves	5 days	Mon 11/3/14	Fri 11/7/14	CDE
380	Pearson updates training materials	5 days	Mon 11/10/14	Fri 11/14/14	Pearson
381	Open Ended Training Material Approved	0 days	Fri 11/14/14	Fri 11/14/14	Pearson
382	Operational Scoring Window	7 days	Mon 11/17/14	Tue 11/25/14	Pearson
383	**Field Test Scoring**	**43 days**	**Mon 12/15/14**	**Wed 2/11/15**	
384	**Rangefinding**	**23 days**	**Mon 12/15/14**	**Wed 1/14/15**	
385	Recruit Rangefinding Participants	20 days	Mon 12/15/14	Fri 1/9/15	Pearson
386	Rangefinding Meeting	3 days	Mon 1/12/15	Wed 1/14/15	Pearson
387	Scoring Training Materials review rounds	10 days	Thu 1/15/15	Wed 1/28/15	Pearson
388	Scoring Training Materials – CDE Review Final	3 days	Thu 1/29/15	Mon 2/2/15	CDE
389	Field Test Scoring Window	7 days	Tue 2/3/15	Wed 2/11/15	Pearson
390	Scoring Site Scheduled Visit - CDE	2 days	Thu 2/12/15	Fri 2/13/15	CDE
391	**Scoring Specifications**	**35 days**	**Tue 7/1/14**	**Mon 8/18/14**	
392	Reliability and Validity Scoring Specification/Procedures review rounds	30 days	Tue 7/1/14	Mon 8/11/14	Pearson
393	Reliability and Validity Scoring Specification/Procedures - CDE Review Final	5 days	Tue 8/12/14	Mon 8/18/14	CDE
394	Procedures for Unusual Responses - review rounds	30 days	Tue 7/1/14	Mon 8/11/14	Pearson
395	Procedures for Unusual Responses - CDE Review Final	5 days	Tue 8/12/14	Mon 8/18/14	CDE
396	Rescoring Specifications/Procedures review rounds	30 days	Tue 7/1/14	Mon 8/11/14	Pearson
397	Rescoring Specifications/Procedures - CDE Review Final	5 days	Tue 8/12/14	Mon 8/18/14	CDE
398	**Spring 2015 - Elementary and Middle**	**260 days**	**Tue 7/1/14**	**Mon 6/29/15**	
399	**Scoring Processes**	**260 days**	**Tue 7/1/14**	**Mon 6/29/15**	
400	Scanning Specifications review rounds	20 days	Tue 7/1/14	Mon 7/28/14	Pearson
401	Scanning Specifications – CDE Review Final	5 days	Tue 7/29/14	Mon 8/4/14	CDE
402	Materials Scanned	10 days	Thu 5/7/15	Wed 5/20/15	Pearson
403	Key Verification – CDE Review	2 days	Fri 5/1/15	Mon 5/4/15	CDE
404	Alerts Resolved and Clean Post	10 days	Thu 5/7/15	Wed 5/20/15	Pearson
405	Pearson Scoring System (ePEN) in Production	0 days	Fri 5/1/15	Fri 5/1/15	
406	**Operational Scoring**	**232 days**	**Tue 7/1/14**	**Wed 5/20/15**	
407	Scoring Staff Requirements Established	0 days	Tue 7/1/14	Tue 7/1/14	Pearson
408	Scoring Staff Recruitment and Hiring	20 days	Mon 4/13/15	Fri 5/8/15	Pearson
409	**Operational Scoring Training Materials**	**25 days**	**Wed 12/3/14**	**Tue 1/6/15**	
410	Pearson creates draft training materials	15 days	Wed 12/3/14	Tue 12/23/14	Pearson
411	CDE reviews/approves	5 days	Wed 12/24/14	Tue 12/30/14	CDE
412	Pearson updates training materials	5 days	Wed 12/31/14	Tue 1/6/15	Pearson
413	Open Ended Training Material Approved	0 days	Tue 1/6/15	Tue 1/6/15	
414	Operational Scoring Window	10 days	Thu 5/7/15	Wed 5/20/15	Pearson
415	**Field Test Scoring**	**258 days**	**Tue 7/1/14**	**Thu 6/25/15**	
416	Recruit Rangefinding Participants	20 days	Mon 4/20/15	Fri 5/15/15	Pearson
417	Rangefinding Meeting	3 days	Tue 5/26/15	Thu 5/28/15	Pearson
418	Scoring Staff Requirements Established	0 days	Tue 7/1/14	Tue 7/1/14	Pearson
419	Scoring Staff Recruitment and Hiring	20 days	Fri 5/1/15	Thu 5/28/15	Pearson

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
420	Scoring Training Materials review rounds	10 days	Fri 5/29/15	Thu 6/11/15	Pearson
421	Scoring Training Materials – CDE Review Final	3 days	Fri 6/12/15	Tue 6/16/15	CDE
422	Scoring Window	7 days	Wed 6/17/15	Thu 6/25/15	Pearson
423	Scoring Site Scheduled Visit - CDE	2 days	Fri 6/26/15	Mon 6/29/15	CDE
424	**Scoring Specifications**	**35 days**	**Tue 7/1/14**	**Mon 8/18/14**	
425	Reliability and Validity Scoring Specification/Procedures review rounds	30 days	Tue 7/1/14	Mon 8/11/14	Pearson
426	Reliability and Validity Scoring Specification/Procedures - CDE Review Final	5 days	Tue 8/12/14	Mon 8/18/14	CDE
427	Procedures for Unusual Responses - review rounds	30 days	Tue 7/1/14	Mon 8/11/14	Pearson
428	Procedures for Unusual Responses - CDE Review Final	5 days	Tue 8/12/14	Mon 8/18/14	CDE
429	Rescoring Specifications/Procedures review rounds	30 days	Tue 7/1/14	Mon 8/11/14	Pearson
430	Rescoring Specifications/Procedures - CDE Review Final	5 days	Tue 8/12/14	Mon 8/18/14	CDE
431	**Reporting of Data Files and Assessment Results**	**262 days**	**Tue 7/1/14**	**Wed 7/1/15**	
432	**Reporting Files - Specs**	**65 days**	**Tue 7/1/14**	**Mon 9/29/14**	
433	Reporting: Data File Layout review rounds	45 days	Tue 7/1/14	Mon 9/1/14	Pearson
434	Reporting: Score Report Shells review rounds	60 days	Tue 7/1/14	Mon 9/22/14	Pearson
435	Reporting: Individual Student Level File Layout - CDE Review Final	5 days	Tue 9/2/14	Mon 9/8/14	CDE
436	Reporting: Individual Student Level Report Shells – CDE Review Final	5 days	Tue 9/23/14	Mon 9/29/14	CDE
437	Reporting: State Level File Layouts – CDE Review Final	5 days	Tue 9/2/14	Mon 9/8/14	CDE
438	Reporting: District Level File Layouts – CDE Review Final	5 days	Tue 9/2/14	Mon 9/8/14	CDE
439	Reporting: District Level Report Shells – CDE Review Final	5 days	Tue 9/23/14	Mon 9/29/14	CDE
440	Reporting: School Level File Layouts – CDE Review Final	5 days	Tue 9/2/14	Mon 9/8/14	CDE
441	Reporting: School Level Report Shells – CDE Review Final	5 days	Tue 9/23/14	Mon 9/29/14	CDE
442	**Fall 2014 - High School**	**132 days**	**Tue 7/1/14**	**Wed 12/31/14**	
443	**Reports**	**33 days**	**Mon 11/17/14**	**Wed 12/31/14**	
444	Student Biographical Data Review Window	10 days	Mon 11/17/14	Fri 11/28/14	
445	**Operational Reporting - Science, Social Studies**	**16 days**	**Wed 12/10/14**	**Wed 12/31/14**	
446	Reporting: QC of Individual Student Level File – CDE Review	1 day	Wed 12/10/14	Wed 12/10/14	CDE
447	Reporting: QC of Individual Student Level File – CDE Verification	0 days	Wed 12/10/14	Wed 12/10/14	CDE
448	Reporting: Individual Student Level File Posted	0 days	Wed 12/10/14	Wed 12/10/14	Pearson
449	Reporting: Individual Student Report Bellwethers	2 days	Tue 12/16/14	Wed 12/17/14	CDE
450	Reporting: Individual Student Level File Electronic Reports Posted	0 days	Mon 12/22/14	Mon 12/22/14	Pearson
451	Reporting: Individual Student Level Hard Copy Reports in District	0 days	Wed 12/31/14	Wed 12/31/14	Pearson
452	**State Level Files**	**8 days**	**Wed 12/10/14**	**Fri 12/19/14**	
453	Pearson updates scoring system and produces/verifies State Level File	6 days	Wed 12/10/14	Wed 12/17/14	Pearson
454	Reporting: QC of State Level File(s) – CDE Review	2 days	Thu 12/18/14	Fri 12/19/14	CDE
455	Reporting: QC of State Level File(s) – CDE Verification	0 days	Fri 12/19/14	Fri 12/19/14	CDE
456	Reporting: State Level File(s) Posted	0 days	Fri 12/19/14	Fri 12/19/14	Pearson
457	**District Level Files**	**10 days**	**Thu 12/18/14**	**Wed 12/31/14**	
458	Reporting: QC of District Level File(s) – CDE Review	2 days	Thu 12/18/14	Fri 12/19/14	CDE
459	Reporting: QC of District Level File(s) – CDE Verification	0 days	Fri 12/19/14	Fri 12/19/14	CDE
460	Reporting: District Level File(s) Posted	0 days	Fri 12/19/14	Fri 12/19/14	Pearson
461	Reporting: District Reports Bellwethers	2 days	Thu 12/25/14	Fri 12/26/14	CDE
462	Reporting: District Electronic Reports Posted	0 days	Wed 12/31/14	Wed 12/31/14	Pearson
463	**School Level Files**	**10 days**	**Thu 12/18/14**	**Wed 12/31/14**	
464	Reporting: QC of School Level File(s) – CDE Review	2 days	Thu 12/18/14	Fri 12/19/14	CDE
465	Reporting: QC of School Level File(s) – CDE Verification	0 days	Fri 12/19/14	Fri 12/19/14	CDE
466	Reporting: School Level File(s) Posted	0 days	Fri 12/19/14	Fri 12/19/14	Pearson

EXHIBIT B

					Colorado Summative Schedule - FY2015
ID	Task Name	Duration	Start	Finish	Resource Names
467	Reporting: School Reports Bellwethers	2 days	Thu 12/25/14	Fri 12/26/14	CDE
468	Reporting: School Electronic Reports Posted	0 days	Wed 12/31/14	Wed 12/31/14	Pearson
469	**Interpretive Guide**	**65 days**	**Tue 7/1/14**	**Mon 9/29/14**	
470	Interpretive Guide review rounds	60 days	Tue 7/1/14	Mon 9/22/14	Pearson
471	Assessment Interpretive Guide – Review Final	5 days	Tue 9/23/14	Mon 9/29/14	CDE
472	Assessment Interpretive Guide Posted	0 days	Mon 9/29/14	Mon 9/29/14	Pearson
473	**Spring 2015 - Elementary and Middle**	**262 days**	**Tue 7/1/14**	**Wed 7/1/15**	
474	**Reports**	**30 days**	**Thu 5/21/15**	**Wed 7/1/15**	
475	Student Biographical Data Review Window	10 days	Thu 5/21/15	Wed 6/3/15	
476	**Operational Reporting - Science, Social Studies**	**16 days**	**Wed 6/10/15**	**Wed 7/1/15**	
477	Reporting: QC of Individual Student Level File – CDE Review	1 day	Wed 6/10/15	Wed 6/10/15	CDE
478	Reporting: QC of Individual Student Level File – CDE Verification	0 days	Wed 6/10/15	Wed 6/10/15	CDE
479	Reporting: Individual Student Level File Posted	0 days	Wed 6/10/15	Wed 6/10/15	Pearson
480	Reporting: Individual Student Report Bellwethers	2 days	Tue 6/16/15	Wed 6/17/15	CDE
481	Reporting: Individual Student Level File Electronic Reports Posted	0 days	Mon 6/22/15	Mon 6/22/15	Pearson
482	Reporting: Individual Student Level Hard Copy Reports in District	0 days	Wed 7/1/15	Wed 7/1/15	Pearson
483	**State Level Files**	**8 days**	**Wed 6/3/15**	**Fri 6/12/15**	
484	Pearson updates scoring system and produces/verifies State Level File	6 days	Wed 6/3/15	Wed 6/10/15	Pearson
485	Reporting: QC of State Level File(s) – CDE Review	2 days	Thu 6/11/15	Fri 6/12/15	CDE
486	Reporting: QC of State Level File(s) – CDE Verification	0 days	Fri 6/12/15	Fri 6/12/15	CDE
487	Reporting: State Level File(s) Posted	0 days	Fri 6/12/15	Fri 6/12/15	Pearson
488	**District Level Files**	**10 days**	**Thu 6/11/15**	**Wed 6/24/15**	
489	Reporting: QC of District Level File(s) – CDE Review	2 days	Thu 6/11/15	Fri 6/12/15	CDE
490	Reporting: QC of District Level File(s) – CDE Verification	0 days	Fri 6/12/15	Fri 6/12/15	CDE
491	Reporting: District Level File(s) Posted	0 days	Fri 6/12/15	Fri 6/12/15	Pearson
492	Reporting: District Reports Bellwethers	2 days	Thu 6/18/15	Fri 6/19/15	CDE
493	Reporting: District Electronic Reports Posted	0 days	Wed 6/24/15	Wed 6/24/15	Pearson
494	**School Level Files**	**10 days**	**Thu 6/11/15**	**Wed 6/24/15**	
495	Reporting: QC of School Level File(s) – CDE Review	2 days	Thu 6/11/15	Fri 6/12/15	CDE
496	Reporting: QC of School Level File(s) – CDE Verification	0 days	Fri 6/12/15	Fri 6/12/15	CDE
497	Reporting: School Level File(s) Posted	0 days	Fri 6/12/15	Fri 6/12/15	Pearson
498	Reporting: School Reports Bellwethers	2 days	Thu 6/18/15	Fri 6/19/15	CDE
499	Reporting: School Electronic Reports Posted	0 days	Wed 6/24/15	Wed 6/24/15	Pearson
500	**Interpretive Guide**	**65 days**	**Tue 7/1/14**	**Mon 9/29/14**	
501	Interpretive Guide review rounds	60 days	Tue 7/1/14	Mon 9/22/14	Pearson
502	Assessment Interpretive Guide – Review Final	5 days	Tue 9/23/14	Mon 9/29/14	CDE
503	Assessment Interpretive Guide Posted	0 days	Mon 9/29/14	Mon 9/29/14	Pearson
504	**Psychometric, Research, and Technical Activities**	**293 days**	**Tue 7/1/14**	**Fri 8/14/15**	
505	**Fall High School Field Test and Operational Analysis**	**192 days**	**Tue 7/1/14**	**Wed 3/25/15**	
506	Field Test- Sampling Design	60 days	Tue 7/1/14	Mon 9/22/14	Pearson
507	Psychometric Analysis of Field Test	30 days	Thu 2/12/15	Wed 3/25/15	Pearson
508	Operational Analysis	9 days	Wed 11/26/14	Mon 12/8/14	Pearson
509	CDE Review and Approval of Equating Results	1 day	Tue 12/9/14	Tue 12/9/14	CDE
510	**Spring Elem and MS Field Test and Operational Analysis**	**262 days**	**Tue 7/1/14**	**Wed 7/1/15**	
511	Field Test- Sampling Design	60 days	Tue 7/1/14	Mon 9/22/14	Pearson
512	Psychometric Analysis of Field Test	30 days	Thu 5/21/15	Wed 7/1/15	Pearson
513	Psychometric Operational Analysis (Equating)	8 days	Thu 5/21/15	Mon 6/1/15	Pearson

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
514	CDE Review and Approval of Equating Results	1 day	Tue 6/2/15	Tue 6/2/15	CDE
515	**TAC Meetings**	**112 days**	**Tue 9/2/14**	**Wed 2/4/15**	
516	TAC Meeting 1	2 days	Tue 9/2/14	Wed 9/3/14	Pearson
517	TAC Meeting 2	2 days	Tue 12/2/14	Wed 12/3/14	Pearson
518	TAC Meeting 3	2 days	Tue 2/3/15	Wed 2/4/15	Pearson
519	**Technical Reports**	**178 days**	**Tue 12/9/14**	**Fri 8/14/15**	
520	Technical Report – Final version to CDE	0 days	Fri 8/14/15	Fri 8/14/15	Pearson
521	Irregularity and Data Forensic Report - High School	10 days	Tue 12/9/14	Mon 12/22/14	
522	Irregularity and Data Forensic Report - Elementary and Middle	10 days	Tue 6/2/15	Mon 6/15/15	Pearson
523	**Training and Support**	**179 days**	**Tue 7/1/14**	**Fri 3/6/15**	
524	Understanding Assessment Results Training Materials review rounds	20 days	Tue 7/1/14	Mon 7/28/14	Pearson
525	Understanding Assessment Results Training Material - CDE Final Review	5 days	Tue 7/29/14	Mon 8/4/14	CDE
526	Understanding Assessment Results Training	5 days	Mon 8/25/14	Fri 8/29/14	Pearson
527	Technology Director Training Material review rounds	60 days	Tue 7/1/14	Mon 9/22/14	Pearson
528	Technology Director Training Material CDE Review Final	5 days	Tue 9/23/14	Mon 9/29/14	CDE
529	Conduct Technology Director Training	5 days	Mon 2/2/15	Fri 2/6/15	Pearson
530	Assessment Administration Training Material review rounds	30 days	Fri 1/2/15	Thu 2/12/15	Pearson
531	Assessment Administration Training Material CDE Review Final	5 days	Fri 2/13/15	Thu 2/19/15	CDE
532	Conduct Assessment Administration Training	5 days	Mon 3/2/15	Fri 3/6/15	Pearson
533	**Customer Service**	**260 days**	**Tue 7/1/14**	**Tue 6/30/15**	
534	Customer feedback survey	0 days	Tue 6/30/15	Tue 6/30/15	Pearson
535	Establish DAC Website	20 days	Tue 7/1/14	Mon 7/28/14	Pearson

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
0	**CO Summative - FY2016**	**521 days**	**Tue 9/2/14**	**Wed 8/31/16**	
1	**START**	**521 days**	**Tue 9/2/14**	**Wed 8/31/16**	
2	**General**	**5 days**	**Wed 7/1/15**	**Tue 7/7/15**	
3	Security Plan updated and rebaselined	5 days	Wed 7/1/15	Tue 7/7/15	Pearson
4	**Program Management**	**431 days**	**Tue 1/6/15**	**Wed 8/31/16**	
5	**Project Schedule**	**9 days**	**Wed 7/1/15**	**Mon 7/13/15**	
6	Draft Project Schedule Created	4 days	Wed 7/1/15	Mon 7/6/15	Pearson/ETS
7	Project Schedule - CDE Review	3 days	Tue 7/7/15	Thu 7/9/15	CDE
8	Project Schedule - CDE and Pearson Joint Review	1 day	Fri 7/10/15	Fri 7/10/15	Pearson/ETS/CDE
9	Project Schedule Updated and Baselined	1 day	Mon 7/13/15	Mon 7/13/15	Pearson
10	**Project Meetings**	**227 days**	**Wed 7/1/15**	**Thu 5/12/16**	
11	**Project Meeting 1**	**9 days**	**Wed 7/1/15**	**Mon 7/13/15**	
12	Agenda Drafted and Delivered to CDE	2 days	Wed 7/1/15	Thu 7/2/15	Pearson
13	Meeting held (Denver, CO)	2 days	Fri 7/3/15	Mon 7/6/15	
14	Meeting Minutes Distributed	5 days	Tue 7/7/15	Mon 7/13/15	Pearson
15	**Project Meeting 2**	**9 days**	**Tue 9/1/15**	**Fri 9/11/15**	
16	Agenda Drafted and Delivered to CDE	2 days	Tue 9/1/15	Wed 9/2/15	Pearson
17	Meeting held (Denver, CO)	2 days	Thu 9/3/15	Fri 9/4/15	
18	Meeting Minutes Distributed	5 days	Mon 9/7/15	Fri 9/11/15	Pearson
19	**Project Meeting 3 - In person**	**9 days**	**Tue 11/3/15**	**Fri 11/13/15**	
20	Agenda Drafted and Delivered to CDE	2 days	Tue 11/3/15	Wed 11/4/15	Pearson
21	Meeting held (San Antonio, TX)	2 days	Thu 11/5/15	Fri 11/6/15	
22	Meeting Minutes Distributed	5 days	Mon 11/9/15	Fri 11/13/15	Pearson
23	**Project Meeting 4**	**9 days**	**Mon 1/4/16**	**Thu 1/14/16**	
24	Agenda Drafted and Delivered to CDE	2 days	Mon 1/4/16	Tue 1/5/16	Pearson
25	Meeting held (Denver, CO)	2 days	Wed 1/6/16	Thu 1/7/16	
26	Meeting Minutes Distributed	5 days	Fri 1/8/16	Thu 1/14/16	Pearson
27	**Project Meeting 5**	**9 days**	**Wed 3/2/16**	**Mon 3/14/16**	
28	Agenda Drafted and Delivered to CDE	2 days	Wed 3/2/16	Thu 3/3/16	Pearson
29	Meeting held (Denver, CO)	2 days	Fri 3/4/16	Mon 3/7/16	
30	Meeting Minutes Distributed	5 days	Tue 3/8/16	Mon 3/14/16	Pearson
31	**Project Meeting 6 - In person**	**9 days**	**Mon 5/2/16**	**Thu 5/12/16**	
32	Agenda Drafted and Delivered to CDE	2 days	Mon 5/2/16	Tue 5/3/16	Pearson
33	Meeting held (San Antonio, TX)	2 days	Wed 5/4/16	Thu 5/5/16	
34	Meeting Minutes Distributed	5 days	Fri 5/6/16	Thu 5/12/16	Pearson
35	**Monthy Reports**	**391 days**	**Tue 1/6/15**	**Wed 7/6/16**	
36	Jul	0 days	Wed 8/5/15	Wed 8/5/15	Pearson
37	Aug	0 days	Thu 9/3/15	Thu 9/3/15	Pearson
38	Sep	0 days	Sat 10/3/15	Sat 10/3/15	Pearson
39	Oct	0 days	Thu 11/5/15	Thu 11/5/15	Pearson
40	Nov	0 days	Thu 12/3/15	Thu 12/3/15	Pearson
41	Dec	0 days	Tue 1/6/15	Tue 1/6/15	Pearson
42	Jan	0 days	Thu 2/4/16	Thu 2/4/16	Pearson
43	Feb	0 days	Fri 3/4/16	Fri 3/4/16	Pearson
44	Mar	0 days	Sun 4/3/16	Sun 4/3/16	Pearson
45	Apr	0 days	Thu 5/5/16	Thu 5/5/16	Pearson
46	May	0 days	Fri 6/3/16	Fri 6/3/16	Pearson

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
47	Jun	0 days	Wed 7/6/16	Wed 7/6/16	Pearson
48	**DAC**	**109 days**	**Wed 10/21/15**	**Mon 3/21/16**	
49	DAC Academy	2 days	Thu 2/18/16	Fri 2/19/16	Pearson
50	DAC Management 1	2 days	Wed 10/21/15	Thu 10/22/15	Pearson
51	DAC Management 2	2 days	Fri 3/18/16	Mon 3/21/16	Pearson
52	**Program Improvement**	**227 days**	**Tue 9/8/15**	**Wed 7/20/16**	
53	Program Improvement Plan - Development	15 days	Thu 12/31/15	Wed 1/20/16	Pearson
54	Program Improvement Plan - Production	15 days	Thu 2/25/16	Wed 3/16/16	Pearson
55	Program Improvement Plan - Shipping and Receipt	15 days	Fri 3/25/16	Thu 4/14/16	Pearson
56	Program Improvement Plan - Administration	15 days	Mon 5/2/16	Fri 5/20/16	Pearson
57	Program Improvement Plan - Scanning	15 days	Thu 5/19/16	Wed 6/8/16	Pearson
58	Program Improvement Plan - Scoring	15 days	Mon 6/20/16	Fri 7/8/16	Pearson
59	Program Improvement Plan - Data Processing	15 days	Wed 6/22/16	Tue 7/12/16	Pearson
60	Program Improvement Plan - Reporting and Psychometrics	15 days	Thu 6/30/16	Wed 7/20/16	Pearson
61	Program Improvement Plan - Meetings	15 days	Tue 9/8/15	Mon 9/28/15	Pearson
62	**Invoices**	**240 days**	**Wed 9/30/15**	**Wed 8/31/16**	
63	Invoice Q1	0 days	Wed 9/30/15	Wed 9/30/15	Pearson
64	Invoice Q2	0 days	Thu 12/31/15	Thu 12/31/15	Pearson
65	Invoice Q3	0 days	Thu 3/31/16	Thu 3/31/16	Pearson
66	Invoice Q4	0 days	Wed 6/15/16	Wed 6/15/16	Pearson
67	Invoice - "tail"	0 days	Wed 8/31/16	Wed 8/31/16	Pearson
68	**Assessment Development**	**266 days**	**Tue 6/2/15**	**Tue 6/7/16**	
69	**Documents - Development Specs**	**0 days**	**Wed 7/1/15**	**Wed 7/1/15**	
70	Eligible Content Document - Final	0 days	Wed 7/1/15	Wed 7/1/15	Content
71	Claims Document - Final	0 days	Wed 7/1/15	Wed 7/1/15	Content
72	Reporting Categories Document - Final	0 days	Wed 7/1/15	Wed 7/1/15	Content
73	Assessment Framework - Final	0 days	Wed 7/1/15	Wed 7/1/15	Content
74	Performance Level Descriptors – General - Final	0 days	Wed 7/1/15	Wed 7/1/15	Content
75	Performance Level Descriptors – Grade Level Specific - Final	0 days	Wed 7/1/15	Wed 7/1/15	Content
76	Test Blueprints/Specifications - Final	0 days	Wed 7/1/15	Wed 7/1/15	Content
77	**Style Guide**	**30 days**	**Wed 7/1/15**	**Tue 8/11/15**	
78	Colorado Style Guide - Draft	30 days	Wed 7/1/15	Tue 8/11/15	Content
79	Colorado Style Guide - Final for year	0 days	Wed 7/1/15	Wed 7/1/15	Content
80	**PE Stimuli and Storyboards**	**167 days**	**Wed 7/1/15**	**Thu 2/18/16**	
81	Recruit PE Stimuli and Storyboard Reviewers	25 days	Tue 1/5/16	Mon 2/8/16	Pearson
82	PE Stimuli and Storyboard Develoment	100 days	Wed 7/1/15	Tue 11/17/15	Content
83	PE Stimuli and Storyboard Selection - CDE Review	10 days	Wed 11/18/15	Tue 12/1/15	CDE
84	Prepare PE Stimuli and Storyboard Review Training Meeting materials	5 days	Tue 1/5/16	Mon 1/11/16	Content
85	PE Stimuli and Storyboard Review Training Meeting Materials- CDE Review	5 days	Tue 1/12/16	Mon 1/18/16	CDE
86	Edit and ship materials after CDE review	10 days	Tue 1/19/16	Mon 2/1/16	Content
87	PE Stimuli and Storyboard Review (Combined with another meeting)	3 days	Tue 2/9/16	Thu 2/11/16	Content
88	Content sends final results of PE Stimuli and Storyboard Review meeting to CDE	5 days	Fri 2/12/16	Thu 2/18/16	Content
89	**Item Development (2017 Field Test)**	**91 days**	**Tue 2/2/16**	**Tue 6/7/16**	
90	Item Writer Recruiting	25 days	Tue 2/2/16	Mon 3/7/16	Pearson
91	Develop Training Materials and Item Development Plans	5 days	Tue 2/2/16	Mon 2/8/16	Content
92	Item Development Meeting 1 Materials – CDE Review	5 days	Tue 2/9/16	Mon 2/15/16	CDE
93	Edit and ship materials after CDE review	9 days	Tue 2/16/16	Fri 2/26/16	Content

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
94	Item Development Meeting 1	3 days	Tue 3/8/16	Thu 3/10/16	Content
95	Content provides developers feedback	39 days	Fri 3/11/16	Wed 5/4/16	Content
96	Content develops training materials and item development plans (meeting 2)	5 days	Fri 3/11/16	Thu 3/17/16	Content
97	Item Writer Recruiting	25 days	Fri 3/11/16	Thu 4/14/16	Pearson
98	Item Development Meeting 2 Materials – CDE Review	3 days	Fri 3/18/16	Tue 3/22/16	CDE
99	Edit and ship materials after CDE review	10 days	Wed 3/23/16	Tue 4/5/16	Content
100	Item Development Meeting 2	3 days	Fri 4/15/16	Tue 4/19/16	Content
101	Content provides developers feedback	10 days	Wed 4/20/16	Tue 5/3/16	Content
102	Content conducts internal Content and Editorial Reviews	20 days	Wed 5/4/16	Tue 5/31/16	Content
103	Item Review – CDE Review	5 days	Wed 6/1/16	Tue 6/7/16	CDE
104	**Content and Bias Review - Science, Social Studies**	**49 days**	**Wed 7/1/15**	**Mon 9/7/15**	
105	Item Review – CDE Review (newly written items)	5 days	Wed 7/1/15	Tue 7/7/15	CDE
106	Recruit Content Review Participants	10 days	Wed 7/1/15	Tue 7/14/15	Pearson
107	Content Creates training materials for Content and PLD Meetings	10 days	Wed 7/1/15	Tue 7/14/15	Content
108	Content and PLD Meeting training Materials – CDE Review	5 days	Wed 7/15/15	Tue 7/21/15	CDE
109	Edit and ship materials after CDE review	13 days	Wed 7/22/15	Fri 8/7/15	Content
110	Content and Bias Meeting	3 days	Wed 7/22/15	Fri 7/24/15	Content
111	Content implements edits suggested by committee	30 days	Mon 7/27/15	Fri 9/4/15	Content
112	Content sends final results of Content and Bias Sensitivity Review meeting	1 day	Mon 9/7/15	Mon 9/7/15	Content
113	**Data Review**	**161 days**	**Tue 6/2/15**	**Tue 1/12/16**	
114	**Elementary/Middle**	**52 days**	**Tue 6/2/15**	**Wed 8/12/15**	
115	Recruit Data Review Participants	25 days	Tue 6/2/15	Mon 7/6/15	Pearson
116	Content Creates Data Review Training Materials	5 days	Wed 7/1/15	Tue 7/7/15	Content
117	Produce Data Review Training Materials – CDE Review	4 days	Wed 7/8/15	Mon 7/13/15	CDE
118	Edit and ship materials after CDE review	10 days	Tue 7/14/15	Mon 7/27/15	Content
119	Conduct Data Review meeting	1 day	Tue 7/28/15	Tue 7/28/15	Content
120	Content implements edits suggested by committee	10 days	Wed 7/29/15	Tue 8/11/15	Content
121	Content provides final results of Data Review Meetings	1 day	Wed 8/12/15	Wed 8/12/15	Content
122	**High School**	**31 days**	**Tue 12/1/15**	**Tue 1/12/16**	
123	Recruit Data Review Participants	25 days	Tue 12/1/15	Mon 1/4/16	
124	Content Creates Data Review Training Materials	5 days	Tue 12/1/15	Mon 12/7/15	Pearson
125	Produce Data Review Training Materials – CDE Review	4 days	Tue 12/8/15	Fri 12/11/15	CDE
126	Edit and ship materials after CDE review	10 days	Mon 12/14/15	Fri 12/25/15	Content
127	Conduct Data Review meeting	1 day	Mon 12/28/15	Mon 12/28/15	Content
128	Content implements edits suggested by committee	10 days	Tue 12/29/15	Mon 1/11/16	Content
129	Content provides final results of Data Review Meetings	1 day	Tue 1/12/16	Tue 1/12/16	Content
130	**Form Development**	**239 days**	**Wed 7/1/15**	**Mon 5/30/16**	
131	**Fall 2015 - High School**	**25 days**	**Wed 7/1/15**	**Tue 8/4/15**	
132	**Test/Ancillary Material - Development**	**25 days**	**Wed 7/1/15**	**Tue 8/4/15**	
133	District and School Assessment Coordinator review rounds	20 days	Wed 7/1/15	Tue 7/28/15	Pearson
134	Document Development: District and School Assessment Coordinators Manual – CDE Review Final	5 days	Wed 7/29/15	Tue 8/4/15	CDE
135	Proctors Manual review rounds	20 days	Wed 7/1/15	Tue 7/28/15	Pearson
136	Document Development: Proctors Manual – CDE Review Final	5 days	Wed 7/29/15	Tue 8/4/15	CDE
137	Certification Forms review rounds	20 days	Wed 7/1/15	Tue 7/28/15	Pearson
138	Document Development: Certification Forms – CDE Review Final	5 days	Wed 7/29/15	Tue 8/4/15	CDE
139	Ancillary Materials (Manipulatives) review rounds	20 days	Wed 7/1/15	Tue 7/28/15	Pearson

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
140	Document Development: Ancillary Materials – CDE Review Final	5 days	Wed 7/29/15	Tue 8/4/15	CDE
141	Field Testing Plan	20 days	Wed 7/1/15	Tue 7/28/15	Pearson
142	**Spring 2016 - Elementary and Middle**	**156 days**	**Wed 7/1/15**	**Wed 2/3/16**	
143	**Core Test Form Development (Science, Social Studies)**	**35 days**	**Thu 8/13/15**	**Wed 9/30/15**	
144	Content constructs forms	20 days	Thu 8/13/15	Wed 9/9/15	Content
145	CDE reviews forms	5 days	Thu 9/10/15	Wed 9/16/15	CDE
146	Content revises forms based on CDE review	5 days	Thu 9/17/15	Wed 9/23/15	Content
147	Core Test Form Development – CDE Review Final	5 days	Thu 9/24/15	Wed 9/30/15	CDE
148	Core Test Form Development – Final	0 days	Wed 9/30/15	Wed 9/30/15	CDE
149	**Embedded Field Test Form Development**	**65 days**	**Thu 10/1/15**	**Wed 12/30/15**	
150	Content constructs forms	50 days	Thu 10/1/15	Wed 12/9/15	Content
151	CDE reviews forms	5 days	Thu 12/10/15	Wed 12/16/15	CDE
152	Content revises forms based on CDE review	5 days	Thu 12/17/15	Wed 12/23/15	Content
153	Embedded Field Test Form Development – Final	5 days	Thu 12/24/15	Wed 12/30/15	CDE
154	Content sends Production ready files to Pearson (Files to Print)	0 days	Wed 12/30/15	Wed 12/30/15	Content
155	**Special Populations**	**116 days**	**Wed 7/1/15**	**Wed 12/9/15**	
156	Accommodations Procedures Manual review rounds	60 days	Wed 7/1/15	Tue 9/22/15	Pearson
157	Accommodations Procedures Manual - CDE Review Final	5 days	Wed 9/23/15	Tue 9/29/15	CDE
158	**Paper and Pencil Accommodated Versions (Reuse from Spring 2015)**	**5 days**	**Wed 7/1/15**	**Tue 7/7/15**	
159	Accommodated Materials: Paper and Pencil Accommodated Forms - CDE Review Final	5 days	Wed 7/1/15	Tue 7/7/15	CDE
160	Content sends Production ready files to Pearson (Files to Print)	0 days	Tue 7/7/15	Tue 7/7/15	Content
161	**Large Print Test Form Development (Reuse from Spring 2015)**	**5 days**	**Wed 7/1/15**	**Tue 7/7/15**	
162	Accommodated Materials: Large Print - CDE Review Final	5 days	Wed 7/1/15	Tue 7/7/15	CDE
163	Content sends Production ready files to Pearson (Files to Print)	0 days	Tue 7/7/15	Tue 7/7/15	Content
164	**Braille Test Form Development (Reuse from Spring 2015)**	**0 days**	**Wed 7/1/15**	**Wed 7/1/15**	
165	Accommodated Materials: Braille Review	0 days	Wed 7/1/15	Wed 7/1/15	CDE
166	Content sends Production ready files to Pearson (Files to Print)	0 days	Wed 7/1/15	Wed 7/1/15	Content
167	**English and Spanish Oral Scripts (Online and Paper/Pencil) -- Paper Reuse from Spring 2015**	**50 days**	**Thu 10/1/15**	**Wed 12/9/15**	
168	Content constructs scripts (Online Only)	30 days	Thu 10/1/15	Wed 11/11/15	Content
169	CDE reviews scripts	5 days	Thu 11/12/15	Wed 11/18/15	CDE
170	Content revises scripts based on CDE review	5 days	Thu 11/19/15	Wed 11/25/15	Content
171	Accommodated Materials: English Oral Scripts – CDE Review Final	5 days	Thu 11/26/15	Wed 12/2/15	CDE
172	Accommodated Materials: Spanish Oral Scripts – CDE Review Final	5 days	Thu 12/3/15	Wed 12/9/15	CDE
173	Content sends Production ready files to Pearson (files to print)	0 days	Wed 12/9/15	Wed 12/9/15	Content
174	**Teacher Read Directions**	**50 days**	**Thu 10/1/15**	**Wed 12/9/15**	
175	Content constructs directions	35 days	Thu 10/1/15	Wed 11/18/15	Content
176	CDE reviews directions	5 days	Thu 11/19/15	Wed 11/25/15	CDE
177	Content revises forms based on CDE review	5 days	Thu 11/26/15	Wed 12/2/15	Content
178	Accommodated Materials: Teacher Read Directions – CDE Review Final	5 days	Thu 12/3/15	Wed 12/9/15	CDE
179	Content sends Production ready files to Pearson	0 days	Wed 12/9/15	Wed 12/9/15	Content
180	**Certification for District Translators**	**65 days**	**Wed 7/1/15**	**Tue 9/29/15**	
181	Procedures documente produced	60 days	Wed 7/1/15	Tue 9/22/15	Pearson
182	Procedures for Certification for District Translators – CDE Review Final	5 days	Wed 9/23/15	Tue 9/29/15	CDE
183	**Test/Ancillary Material - Development**	**156 days**	**Wed 7/1/15**	**Wed 2/3/16**	
184	District and School Assessment Coordinator review rounds	20 days	Wed 7/1/15	Tue 7/28/15	Pearson

					Colorado Summative Schedule - FY2016
ID	Task Name	Duration	Start	Finish	Resource Names
185	Document Development: District and School Assessment Coordinators Manual – CDE Review Final	5 days	Wed 7/29/15	Tue 8/4/15	CDE
186	Proctors Manual review rounds	20 days	Thu 12/31/15	Wed 1/27/16	Pearson
187	Document Development: Proctors Manual – CDE Review Final	5 days	Thu 1/28/16	Wed 2/3/16	CDE
188	Certification Forms review rounds	20 days	Wed 7/1/15	Tue 7/28/15	Pearson
189	Document Development: Certification Forms – CDE Review Final	5 days	Wed 7/29/15	Tue 8/4/15	CDE
190	Answer Document review rounds	20 days	Wed 7/1/15	Tue 7/28/15	Pearson
191	Document Development: Answer Document Layout - CDE Review Final	5 days	Wed 7/29/15	Tue 8/4/15	CDE
192	Document Development: Test Bookl Content/Answer Documents – CDE Review Final	5 days	Thu 1/7/16	Wed 1/13/16	CDE
193	Ancillary Materials (Manipulatives) review rounds	60 days	Wed 7/1/15	Tue 9/22/15	Pearson
194	Document Development: Ancillary Materials – CDE Review Final	5 days	Wed 9/23/15	Tue 9/29/15	CDE
195	**Fall 2016 - High School (must occur in FY16)**	**239 days**	**Wed 7/1/15**	**Mon 5/30/16**	
196	**Core Test Form Development (Science, Social Studies)**	**35 days**	**Tue 12/29/15**	**Mon 2/15/16**	
197	Content constructs forms	20 days	Tue 12/29/15	Mon 1/25/16	Content
198	CDE reviews forms	5 days	Tue 1/26/16	Mon 2/1/16	CDE
199	Content revises forms based on CDE review	5 days	Tue 2/2/16	Mon 2/8/16	Content
200	Core Test Form Development – CDE Review Final	5 days	Tue 2/9/16	Mon 2/15/16	CDE
201	Core Test Form Development – Final	0 days	Mon 2/15/16	Mon 2/15/16	CDE
202	**Embedded Field Test Form Development**	**45 days**	**Tue 2/16/16**	**Mon 4/18/16**	
203	Content constructs forms	30 days	Tue 2/16/16	Mon 3/28/16	Content
204	CDE reviews forms	5 days	Tue 3/29/16	Mon 4/4/16	CDE
205	Content revises forms based on CDE review	5 days	Tue 4/5/16	Mon 4/11/16	Content
206	Embedded Field Test Form Development – Final	5 days	Tue 4/12/16	Mon 4/18/16	CDE
207	Content sends Production ready files to Pearson (Files to Print)	0 days	Mon 4/18/16	Mon 4/18/16	Content
208	**Special Populations**	**239 days**	**Wed 7/1/15**	**Mon 5/30/16**	
209	Accommodations Procedures Manual review rounds	60 days	Wed 7/1/15	Tue 9/22/15	Pearson
210	Accommodations Procedures Manual - CDE Review Final	5 days	Wed 9/23/15	Tue 9/29/15	CDE
211	**Paper and Pencil Accommodated Versions**	**25 days**	**Tue 2/16/16**	**Mon 3/21/16**	
212	Paper and Pencil Accommodated Versions Development	20 days	Tue 2/16/16	Mon 3/14/16	Content
213	Accommodated Materials: Paper and Pencil Accommodated Forms - CDE Review Final	5 days	Tue 3/15/16	Mon 3/21/16	CDE
214	Content sends Production ready files to Pearson (Files to Print)	0 days	Mon 3/21/16	Mon 3/21/16	Content
215	**Large Print Test Form Development**	**45 days**	**Tue 3/22/16**	**Mon 5/23/16**	
216	Large Print Development	40 days	Tue 3/22/16	Mon 5/16/16	Content
217	Accommodated Materials: Large Print - CDE Review Final	5 days	Tue 5/17/16	Mon 5/23/16	CDE
218	Content sends Production ready files to Pearson (Files to Print)	0 days	Mon 5/23/16	Mon 5/23/16	Content
219	**Braille Test Form Development**	**75 days**	**Tue 2/16/16**	**Mon 5/30/16**	
220	Content performs accessibilty review of approved forms	10 days	Tue 2/16/16	Mon 2/29/16	Content
221	Braille Development	50 days	Tue 3/1/16	Mon 5/9/16	Braille Vendor
222	Content prepares and ships materials for Braille forms review	5 days	Tue 5/10/16	Mon 5/16/16	Content
223	Braille Forms Review Meeting	5 days	Tue 5/17/16	Mon 5/23/16	Content
224	Accommodated Materials: Braille Review	0 days	Mon 5/23/16	Mon 5/23/16	CDE
225	Content reconciles edits and sends Braille summary meeting results to CDE	5 days	Tue 5/24/16	Mon 5/30/16	Content
226	Content sends Production ready files to Pearson (Files to Print)	0 days	Mon 5/30/16	Mon 5/30/16	Content
227	**English and Spanish Oral Scripts (Online and Paper/Pencil)**	**50 days**	**Tue 2/16/16**	**Mon 4/25/16**	
228	Content constructs scripts	30 days	Tue 2/16/16	Mon 3/28/16	Content
229	CDE reviews scripts	5 days	Tue 3/29/16	Mon 4/4/16	CDE

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
230	Content revises scripts based on CDE review	5 days	Tue 4/5/16	Mon 4/11/16	Content
231	Accommodated Materials: English Oral Scripts – CDE Review Final	5 days	Tue 4/12/16	Mon 4/18/16	CDE
232	Accommodated Materials: Spanish Oral Scripts – CDE Review Final	5 days	Tue 4/19/16	Mon 4/25/16	CDE
233	Content sends Production ready files to Pearson (files to print)	0 days	Mon 4/25/16	Mon 4/25/16	Content
234	**Teacher Read Directions (Part of TAM)**	**50 days**	**Tue 2/16/16**	**Mon 4/25/16**	
235	Content constructs directions	35 days	Tue 2/16/16	Mon 4/4/16	Content
236	CDE reviews directions	5 days	Tue 4/5/16	Mon 4/11/16	CDE
237	Content revises forms based on CDE review	5 days	Tue 4/12/16	Mon 4/18/16	Content
238	Accommodated Materials: Teacher Read Directions – CDE Review Final	5 days	Tue 4/19/16	Mon 4/25/16	CDE
239	Content sends Production ready files to Pearson	0 days	Mon 4/25/16	Mon 4/25/16	Content
240	**Certification for District Translators**	**65 days**	**Wed 7/1/15**	**Tue 9/29/15**	
241	Procedures documente produced	60 days	Wed 7/1/15	Tue 9/22/15	Pearson
242	Procedures for Certification for District Translators – CDE Review Final	5 days	Wed 9/23/15	Tue 9/29/15	CDE
243	**Assessment Administration**	**433 days**	**Fri 1/2/15**	**Wed 8/31/16**	
244	**Fall 2015 - High School**	**424 days**	**Thu 1/15/15**	**Wed 8/31/16**	
245	**Orders for Materials**	**45 days**	**Tue 9/1/15**	**Mon 11/2/15**	
246	Materials Ordering System Operational	0 days	Tue 9/1/15	Tue 9/1/15	Pearson
247	Materials Ordering Window (SDU's)	10 days	Tue 9/1/15	Mon 9/14/15	Pearson
248	Online Rosters Generated	5 days	Tue 9/15/15	Mon 9/21/15	Pearson
249	Additional Materials Ordering Window	30 days	Tue 9/22/15	Mon 11/2/15	Pearson
250	**Test/Ancillary Material - Production**	**25 days**	**Wed 7/1/15**	**Tue 8/4/15**	
251	Proctors Manual Produced	15 days	Wed 7/1/15	Tue 7/21/15	Pearson
252	Test Bookl Content/Answer Documents Produced	25 days	Wed 7/1/15	Tue 8/4/15	Pearson
253	Ancillaries Produced	15 days	Wed 7/1/15	Tue 7/21/15	Pearson
254	Accommodated Materials Produced	25 days	Wed 7/1/15	Tue 8/4/15	Pearson
255	Certification Forms Produced	5 days	Wed 7/1/15	Tue 7/7/15	Pearson
256	**Packaging and Delivery**	**72 days**	**Wed 7/1/15**	**Thu 10/8/15**	
257	Colorado Districts in Shipping System	0 days	Wed 7/1/15	Wed 7/1/15	Pearson
258	Packaging Specifications Finalized	0 days	Wed 7/1/15	Wed 7/1/15	Pearson
259	Non-secure Materials Packaged	10 days	Tue 9/22/15	Mon 10/5/15	Pearson
260	Non-secure Materials Shipped	3 days	Tue 10/6/15	Thu 10/8/15	Pearson
261	Non-secure Materials in District	0 days	Thu 10/8/15	Thu 10/8/15	Pearson
262	Secure Materials Packaged	10 days	Tue 9/22/15	Mon 10/5/15	Pearson
263	Secure Materials Shipped	3 days	Tue 10/6/15	Thu 10/8/15	Pearson
264	Secure Materials in District	0 days	Thu 10/8/15	Thu 10/8/15	Pearson
265	**Test Administration**	**15 days**	**Mon 10/26/15**	**Fri 11/13/15**	
266	Operational Test Administration Window - High School Science, Social Studies	15 days	Mon 10/26/15	Fri 11/13/15	
267	**Material Return and Verification**	**205 days**	**Tue 11/17/15**	**Wed 8/31/16**	
268	To Be Scored Materials Return Shipment	0 days	Tue 11/17/15	Tue 11/17/15	Pearson
269	Not To Be Scored Materials Return Shipment	0 days	Thu 11/19/15	Thu 11/19/15	Pearson
270	Non-scored Materials Destruction	0 days	Fri 11/20/15	Fri 11/20/15	Pearson
271	Scored Materials Destruction	0 days	Wed 8/31/16	Wed 8/31/16	Pearson
272	Secure Materials Verification – Initial Report	0 days	Thu 12/3/15	Thu 12/3/15	Pearson
273	Secure Materials Verification – Weekly Report	0 days	Thu 12/10/15	Thu 12/10/15	Pearson
274	Secure Materials Verification – Final Report	0 days	Thu 12/17/15	Thu 12/17/15	Pearson
275	**Test Monitoring**	**217 days**	**Thu 1/15/15**	**Fri 11/13/15**	
276	Test Monitoring Protocol review rounds	60 days	Wed 7/1/15	Tue 9/22/15	Pearson

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
277	Test Monitoring Protocol – CDE Review Final	5 days	Wed 9/23/15	Tue 9/29/15	CDE
278	Test Monitoring Sites Selected	0 days	Thu 1/15/15	Thu 1/15/15	Pearson
279	Test Monitoring Sites Notified – TBD if needed	0 days	Fri 2/13/15	Fri 2/13/15	Pearson
280	Test Monitoring	15 days	Mon 10/26/15	Fri 11/13/15	Pearson
281	**Spring 2015 - Elementary and Middle**	**433 days**	**Fri 1/2/15**	**Wed 8/31/16**	
282	**Orders for Materials**	**60 days**	**Tue 2/2/16**	**Mon 4/25/16**	
283	Pre-ID (State SDU) File Transfer	0 days	Tue 2/2/16	Tue 2/2/16	CDE
284	Materials Ordering System Operational	0 days	Tue 2/2/16	Tue 2/2/16	Pearson
285	Materials Ordering Window (SDU's)	20 days	Tue 2/2/16	Mon 2/29/16	Pearson
286	Online Rosters Generated	5 days	Tue 3/1/16	Mon 3/7/16	Pearson
287	Additional Materials Ordering Window	35 days	Tue 3/8/16	Mon 4/25/16	Pearson
288	**Test/Ancillary Material - Production**	**171 days**	**Wed 7/1/15**	**Wed 2/24/16**	
289	Proctors Manual Produced	15 days	Thu 2/4/16	Wed 2/24/16	Pearson
290	Test BooklContent/Answer Documents Produced	25 days	Thu 12/31/15	Wed 2/3/16	Pearson
291	Ancillaries Produced	15 days	Wed 9/30/15	Tue 10/20/15	Pearson
292	Accommodated Materials Produced	25 days	Wed 7/1/15	Tue 8/4/15	Pearson
293	Certification Forms Produced	5 days	Wed 8/5/15	Tue 8/11/15	Pearson
294	**Packaging and Delivery**	**320 days**	**Fri 1/2/15**	**Thu 3/24/16**	
295	Colorado Districts in Shipping System	0 days	Tue 2/2/16	Tue 2/2/16	Pearson
296	Packaging Specifications Finalized	0 days	Fri 1/2/15	Fri 1/2/15	Pearson
297	Non-secure Materials Packaged	10 days	Tue 3/8/16	Mon 3/21/16	Pearson
298	Non-secure Materials Shipped	3 days	Tue 3/22/16	Thu 3/24/16	Pearson
299	Non-secure Materials in District	0 days	Thu 3/24/16	Thu 3/24/16	Pearson
300	Secure Materials Packaged	10 days	Tue 3/8/16	Mon 3/21/16	Pearson
301	Secure Materials Shipped	3 days	Tue 3/22/16	Thu 3/24/16	Pearson
302	Secure Materials in District	0 days	Thu 3/24/16	Thu 3/24/16	Pearson
303	**Test Administration**	**15 days**	**Mon 4/11/16**	**Fri 4/29/16**	
304	Operational Test Administration Window - ES/MS Science, Social Studies	15 days	Mon 4/11/16	Fri 4/29/16	
305	**Material Return and Verification**	**130 days**	**Wed 3/2/16**	**Wed 8/31/16**	
306	To Be Scored Materials Return Shipment	0 days	Tue 5/3/16	Tue 5/3/16	Pearson
307	Not To Be Scored Materials Return Shipment	0 days	Thu 5/5/16	Thu 5/5/16	Pearson
308	Non-scored Materials Destruction	0 days	Wed 3/2/16	Wed 3/2/16	Pearson
309	Scored Materials Destruction	0 days	Wed 8/31/16	Wed 8/31/16	Pearson
310	Secure Materials Verification – Initial Report	0 days	Thu 5/19/16	Thu 5/19/16	Pearson
311	Secure Materials Verification – Weekly Report	0 days	Thu 5/26/16	Thu 5/26/16	Pearson
312	Secure Materials Verification – Final Report	0 days	Thu 6/2/16	Thu 6/2/16	Pearson
313	**Test Monitoring**	**337 days**	**Thu 1/15/15**	**Fri 4/29/16**	
314	Test Monitoring Protocol review rounds	60 days	Wed 7/1/15	Tue 9/22/15	Pearson
315	Test Monitoring Protocol – CDE Review Final	5 days	Wed 9/23/15	Tue 9/29/15	CDE
316	Test Monitoring Sites Selected	0 days	Thu 1/15/15	Thu 1/15/15	Pearson
317	Test Monitoring Sites Notified – TBD if needed	0 days	Fri 2/13/15	Fri 2/13/15	Pearson
318	Test Monitoring	15 days	Mon 4/11/16	Fri 4/29/16	Pearson
319	**Web-Based Online Test Delivery System**	**201 days**	**Wed 7/1/15**	**Wed 4/6/16**	
320	**Fall 2015 - High School**	**81 days**	**Wed 7/1/15**	**Wed 10/21/15**	
321	**Online Readiness Assessment**	**20 days**	**Wed 7/1/15**	**Tue 7/28/15**	
322	Conduct the Online Readiness Assessment	5 days	Wed 7/1/15	Tue 7/7/15	Pearson
323	Online Readiness Assessment Results	5 days	Wed 7/8/15	Tue 7/14/15	Pearson

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
324	Infrastructure Plan - Final	10 days	Wed 7/15/15	Tue 7/28/15	Pearson
325	**Online Tutorials**	**35 days**	**Wed 7/1/15**	**Tue 8/18/15**	
326	Online Tutorials review rounds	30 days	Wed 7/1/15	Tue 8/11/15	Pearson
327	Online Tutorials – CDE Review Final	5 days	Wed 8/12/15	Tue 8/18/15	CDE
328	Online Tutorials Available for District Use	0 days	Wed 7/1/15	Wed 7/1/15	Pearson
329	Online Accommodations Functionality document review rounds	30 days	Wed 7/1/15	Tue 8/11/15	Pearson
330	Online Accommodations Functionality – CDE Review Final	5 days	Wed 8/12/15	Tue 8/18/15	CDE
331	**Online Test Delivery**	**81 days**	**Wed 7/1/15**	**Wed 10/21/15**	
332	Online Test Delivery System Demonstration	0 days	Wed 7/1/15	Wed 7/1/15	Pearson
333	Online Test Delivery System Testing	80 days	Wed 7/1/15	Tue 10/20/15	Pearson
334	Online Test Delivery System Available for District Installation/Download	0 days	Tue 10/20/15	Tue 10/20/15	Pearson
335	Forms Loaded in Online Test Delivery System	10 days	Thu 10/8/15	Wed 10/21/15	Pearson
336	Mitigation and Contingency Plans - Final	30 days	Wed 7/1/15	Tue 8/11/15	Pearson
337	Establish Unique Log-in ID and Passwords (CDE staff, technology directors, DACs, SACs, test proctors, students)	5 days	Tue 9/22/15	Mon 9/28/15	Pearson
338	Distribute Unique Log-in ID and Passowrds (CDE staff, technology directors, DACs, SACs, test proctors, students)	1 day	Tue 9/29/15	Tue 9/29/15	Pearson
339	**Spring 2015 - Elementary and Middle**	**201 days**	**Wed 7/1/15**	**Wed 4/6/16**	
340	**Online Readiness Assessment**	**20 days**	**Thu 9/17/15**	**Wed 10/14/15**	
341	Conduct the Online Readiness Assessment	5 days	Thu 9/17/15	Wed 9/23/15	Pearson
342	Online Readiness Assessment Results	5 days	Thu 9/24/15	Wed 9/30/15	Pearson
343	Infrastructure Plan - Final	10 days	Thu 10/1/15	Wed 10/14/15	Pearson
344	**Online Tutorials**	**178 days**	**Wed 7/1/15**	**Mon 3/7/16**	
345	Online Tutorials review rounds	30 days	Mon 1/4/16	Fri 2/12/16	Pearson
346	Online Tutorials – CDE Review Final	5 days	Mon 2/15/16	Fri 2/19/16	CDE
347	Online Tutorials Available for District Use	0 days	Mon 3/7/16	Mon 3/7/16	Pearson
348	Online Accommodations Functionality document review rounds	60 days	Wed 7/1/15	Tue 9/22/15	Pearson
349	Online Accommodations Functionality – CDE Review Final	5 days	Wed 9/23/15	Tue 9/29/15	CDE
350	**Online Test Delivery**	**201 days**	**Wed 7/1/15**	**Wed 4/6/16**	
351	Online Test Delivery System Demonstration	0 days	Sat 8/1/15	Sat 8/1/15	Pearson
352	Online Test Delivery System Testing	80 days	Mon 8/3/15	Fri 11/20/15	Pearson
353	Online Test Delivery System Available for District Installation/Download	0 days	Fri 11/20/15	Fri 11/20/15	Pearson
354	Forms Loaded in Online Test Delivery System	10 days	Thu 3/24/16	Wed 4/6/16	Pearson
355	Mitigation and Contingency Plans - Final	30 days	Wed 7/1/15	Tue 8/11/15	Pearson
356	Establish Unique Log-in ID and Passwords (CDE staff, technology directors, DACs, SACs, test proctors, students)	5 days	Tue 3/8/16	Mon 3/14/16	Pearson
357	Distribute Unique Log-in ID and Passowrds (CDE staff, technology directors, DACs, SACs, test proctors, students)	1 day	Tue 3/15/16	Tue 3/15/16	Pearson
358	**Scanning and Scoring**	**397 days**	**Mon 12/15/14**	**Tue 6/21/16**	
359	**Fall 2015 - High School**	**305 days**	**Mon 12/15/14**	**Fri 2/12/16**	
360	**Scoring Processes**	**305 days**	**Mon 12/15/14**	**Fri 2/12/16**	
361	Scanning Specifications review rounds	20 days	Wed 7/1/15	Tue 7/28/15	Pearson
362	Scanning Specifications – CDE Review Final	5 days	Wed 7/29/15	Tue 8/4/15	CDE
363	Materials Scanned	10 days	Wed 11/18/15	Tue 12/1/15	
364	Key Verification – CDE Review	2 days	Fri 5/1/15	Mon 5/4/15	CDE
365	Alerts Resolved and Clean Post	10 days	Wed 11/18/15	Tue 12/1/15	
366	Pearson Scoring System (ePEN) in Production	0 days	Fri 11/13/15	Fri 11/13/15	Pearson
367	**Operational Scoring**	**105 days**	**Wed 7/1/15**	**Tue 11/24/15**	

					Colorado Summative Schedule - FY2016	
ID	Task Name	Duration	Start	Finish	Resource Names	
368	Scoring Staff Requirements Established	0 days	Wed 7/1/15	Wed 7/1/15	Pearson	
369	Scoring Staff Recruitment and Hiring	20 days	Mon 10/26/15	Fri 11/20/15	Pearson	
370	**Operational Scoring Training Materials**	**25 days**	**Mon 10/12/15**	**Fri 11/13/15**		
371	Pearson creates draft training materials	15 days	Mon 10/12/15	Fri 10/30/15	Pearson	
372	CDE reviews/approves	5 days	Mon 11/2/15	Fri 11/6/15	CDE	
373	Pearson updates training materials	5 days	Mon 11/9/15	Fri 11/13/15	Pearson	
374	Open Ended Training Material Approved	0 days	Fri 11/13/15	Fri 11/13/15	Pearson	
375	Operational Scoring Window	7 days	Mon 11/16/15	Tue 11/24/15	Pearson	
376	**Field Test Scoring**	**303 days**	**Mon 12/15/14**	**Wed 2/10/16**		
377	**Rangefinding**	**283 days**	**Mon 12/15/14**	**Wed 1/13/16**		
378	Recruit Rangefinding Participants	20 days	Mon 12/15/14	Fri 1/9/15	Pearson	
379	Rangefinding Meeting	3 days	Mon 1/11/16	Wed 1/13/16	Pearson	
380	Scoring Training Materials review rounds	10 days	Thu 1/14/16	Wed 1/27/16	Pearson	
381	Scoring Training Materials – CDE Review Final	3 days	Thu 1/28/16	Mon 2/1/16	CDE	
382	Field Test Scoring Window	7 days	Tue 2/2/16	Wed 2/10/16	Pearson	
383	Scoring Site Scheduled Visit - CDE	2 days	Thu 2/11/16	Fri 2/12/16	CDE	
384	**Scoring Specifications**	**35 days**	**Wed 7/1/15**	**Tue 8/18/15**		
385	Reliability and Validity Scoring Specification/Procedures review rounds	30 days	Wed 7/1/15	Tue 8/11/15	Pearson	
386	Reliability and Validity Scoring Specification/Procedures - CDE Review Final	5 days	Wed 8/12/15	Tue 8/18/15	CDE	
387	Procedures for Unusual Responses - review rounds	30 days	Wed 7/1/15	Tue 8/11/15	Pearson	
388	Procedures for Unusual Responses - CDE Review Final	5 days	Wed 8/12/15	Tue 8/18/15	CDE	
389	Rescoring Specifications/Procedures review rounds	30 days	Wed 7/1/15	Tue 8/11/15	Pearson	
390	Rescoring Specifications/Procedures - CDE Review Final	5 days	Wed 8/12/15	Tue 8/18/15	CDE	
391	**Spring 2016 - Elementary and Middle**	**298 days**	**Fri 5/1/15**	**Tue 6/21/16**		
392	**Scoring Processes**	**298 days**	**Fri 5/1/15**	**Tue 6/21/16**		
393	Scanning Specifications review rounds	20 days	Wed 7/1/15	Tue 7/28/15	Pearson	
394	Scanning Specifications – CDE Review Final	5 days	Wed 7/29/15	Tue 8/4/15	CDE	
395	Materials Scanned	10 days	Thu 5/5/16	Wed 5/18/16	Pearson	
396	Key Verification – CDE Review	2 days	Fri 5/1/15	Mon 5/4/15	CDE	
397	Alerts Resolved and Clean Post	10 days	Thu 5/5/16	Wed 5/18/16	Pearson	
398	Pearson Scoring System (ePEN) in Production	0 days	Fri 4/29/16	Fri 4/29/16		
399	**Operational Scoring**	**231 days**	**Wed 7/1/15**	**Wed 5/18/16**		
400	Scoring Staff Requirements Established	0 days	Wed 7/1/15	Wed 7/1/15	Pearson	
401	Scoring Staff Recruitment and Hiring	20 days	Mon 4/11/16	Fri 5/6/16	Pearson	
402	**Operational Scoring Training Materials**	**25 days**	**Thu 12/31/15**	**Wed 2/3/16**		
403	Pearson creates draft training materials	15 days	Thu 12/31/15	Wed 1/20/16	Pearson	
404	CDE reviews/approves	5 days	Thu 1/21/16	Wed 1/27/16	CDE	
405	Pearson updates training materials	5 days	Thu 1/28/16	Wed 2/3/16	Pearson	
406	Open Ended Training Material Approved	0 days	Wed 2/3/16	Wed 2/3/16		
407	Operational Scoring Window	10 days	Thu 5/5/16	Wed 5/18/16	Pearson	
408	**Field Test Scoring**	**253 days**	**Wed 7/1/15**	**Fri 6/17/16**		
409	Recruit Rangefinding Participants	20 days	Wed 4/20/16	Tue 5/17/16	Pearson	
410	Rangefinding Meeting	3 days	Wed 5/18/16	Fri 5/20/16	Pearson	
411	Scoring Staff Requirements Established	0 days	Wed 7/1/15	Wed 7/1/15	Pearson	
412	Scoring Staff Recruitment and Hiring	20 days	Wed 4/20/16	Tue 5/17/16	Pearson	
413	Scoring Training Materials review rounds	10 days	Mon 5/23/16	Fri 6/3/16	Pearson	
414	Scoring Training Materials – CDE Review Final	3 days	Mon 6/6/16	Wed 6/8/16	CDE	

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
415	Scoring Window	7 days	Thu 6/9/16	Fri 6/17/16	Pearson
416	Scoring Site Scheduled Visit - CDE	2 days	Mon 6/20/16	Tue 6/21/16	CDE
417	**Scoring Specifications**	**35 days**	**Wed 7/1/15**	**Tue 8/18/15**	
418	Reliability and Validity Scoring Specification/Procedures review rounds	30 days	Wed 7/1/15	Tue 8/11/15	Pearson
419	Reliability and Validity Scoring Specification/Procedures - CDE Review Final	5 days	Wed 8/12/15	Tue 8/18/15	CDE
420	Procedures for Unusual Responses - review rounds	30 days	Wed 7/1/15	Tue 8/11/15	Pearson
421	Procedures for Unusual Responses - CDE Review Final	5 days	Wed 8/12/15	Tue 8/18/15	CDE
422	Rescoring Specifications/Procedures review rounds	30 days	Wed 7/1/15	Tue 8/11/15	Pearson
423	Rescoring Specifications/Procedures - CDE Review Final	5 days	Wed 8/12/15	Tue 8/18/15	CDE
424	**Reporting of Data Files and Assessment Results**	**261 days**	**Wed 7/1/15**	**Wed 6/29/16**	
425	**Reporting Files - Specs**	**65 days**	**Wed 7/1/15**	**Tue 9/29/15**	
426	Reporting: Data File Layout review rounds	45 days	Wed 7/1/15	Tue 9/1/15	Pearson
427	Reporting: Score Report Shells review rounds	60 days	Wed 7/1/15	Tue 9/22/15	Pearson
428	Reporting: Individual Student Level File Layout - CDE Review Final	5 days	Wed 9/2/15	Tue 9/8/15	CDE
429	Reporting: Individual Student Level Report Shells – CDE Review Final	5 days	Wed 9/23/15	Tue 9/29/15	CDE
430	Reporting: State Level File Layouts – CDE Review Final	5 days	Wed 9/2/15	Tue 9/8/15	CDE
431	Reporting: District Level File Layouts – CDE Review Final	5 days	Wed 9/2/15	Tue 9/8/15	CDE
432	Reporting: District Level Report Shells – CDE Review Final	5 days	Wed 9/23/15	Tue 9/29/15	CDE
433	Reporting: School Level File Layouts – CDE Review Final	5 days	Wed 9/2/15	Tue 9/8/15	CDE
434	Reporting: School Level Report Shells – CDE Review Final	5 days	Wed 9/23/15	Tue 9/29/15	CDE
435	**Fall 2015 - High School**	**131 days**	**Wed 7/1/15**	**Wed 12/30/15**	
436	**Reports**	**33 days**	**Mon 11/16/15**	**Wed 12/30/15**	
437	Student Biographical Data Review Window	10 days	Mon 11/16/15	Fri 11/27/15	
438	**Operational Reporting - Science, Social Studies**	**16 days**	**Wed 12/9/15**	**Wed 12/30/15**	
439	Reporting: QC of Individual Student Level File – CDE Review	1 day	Wed 12/9/15	Wed 12/9/15	CDE
440	Reporting: QC of Individual Student Level File – CDE Verification	0 days	Wed 12/9/15	Wed 12/9/15	CDE
441	Reporting: Individual Student Level File Posted	0 days	Wed 12/9/15	Wed 12/9/15	Pearson
442	Reporting: Individual Student Report Bellwethers	2 days	Tue 12/15/15	Wed 12/16/15	CDE
443	Reporting: Individual Student Level File Electronic Reports Posted	0 days	Mon 12/21/15	Mon 12/21/15	Pearson
444	Reporting: Individual Student Level Hard Copy Reports in District	0 days	Wed 12/30/15	Wed 12/30/15	Pearson
445	**State Level Files**	**8 days**	**Wed 12/9/15**	**Fri 12/18/15**	
446	Pearson updates scoring system and produces/verifies State Level File	6 days	Wed 12/9/15	Wed 12/16/15	Pearson
447	Reporting: QC of State Level File(s) – CDE Review	2 days	Thu 12/17/15	Fri 12/18/15	CDE
448	Reporting: QC of State Level File(s) – CDE Verification	0 days	Fri 12/18/15	Fri 12/18/15	CDE
449	Reporting: State Level File(s) Posted	0 days	Fri 12/18/15	Fri 12/18/15	Pearson
450	**District Level Files**	**10 days**	**Thu 12/17/15**	**Wed 12/30/15**	
451	Reporting: QC of District Level File(s) – CDE Review	2 days	Thu 12/17/15	Fri 12/18/15	CDE
452	Reporting: QC of District Level File(s) – CDE Verification	0 days	Fri 12/18/15	Fri 12/18/15	CDE
453	Reporting: District Level File(s) Posted	0 days	Fri 12/18/15	Fri 12/18/15	Pearson
454	Reporting: District Reports Bellwethers	2 days	Thu 12/24/15	Fri 12/25/15	CDE
455	Reporting: District Electronic Reports Posted	0 days	Wed 12/30/15	Wed 12/30/15	Pearson
456	**School Level Files**	**10 days**	**Thu 12/17/15**	**Wed 12/30/15**	
457	Reporting: QC of School Level File(s) – CDE Review	2 days	Thu 12/17/15	Fri 12/18/15	CDE
458	Reporting: QC of School Level File(s) – CDE Verification	0 days	Fri 12/18/15	Fri 12/18/15	CDE
459	Reporting: School Level File(s) Posted	0 days	Fri 12/18/15	Fri 12/18/15	Pearson
460	Reporting: School Reports Bellwethers	2 days	Thu 12/24/15	Fri 12/25/15	CDE
461	Reporting: School Electronic Reports Posted	0 days	Wed 12/30/15	Wed 12/30/15	Pearson

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
					Colorado Summative Schedule - FY2016
462	**Interpretive Guide**	**65 days**	**Wed 7/1/15**	**Tue 9/29/15**	
463	Interpretive Guide review rounds	60 days	Wed 7/1/15	Tue 9/22/15	Pearson
464	Assessment Interpretive Guide – Review Final	5 days	Wed 9/23/15	Tue 9/29/15	CDE
465	Assessment Interpretive Guide Posted	0 days	Tue 9/29/15	Tue 9/29/15	Pearson
466	**Spring 2016 - Elementary and Middle**	**261 days**	**Wed 7/1/15**	**Wed 6/29/16**	
467	**Reports**	**30 days**	**Thu 5/19/16**	**Wed 6/29/16**	
468	Student Biographical Data Review Window	10 days	Thu 5/19/16	Wed 6/1/16	
469	**Operational Reporting - Science, Social Studies**	**16 days**	**Wed 6/8/16**	**Wed 6/29/16**	
470	Reporting: QC of Individual Student Level File – CDE Review	1 day	Wed 6/8/16	Wed 6/8/16	CDE
471	Reporting: QC of Individual Student Level File – CDE Verification	0 days	Wed 6/8/16	Wed 6/8/16	CDE
472	Reporting: Individual Student Level File Posted	0 days	Wed 6/8/16	Wed 6/8/16	Pearson
473	Reporting: Individual Student Report Bellwethers	2 days	Tue 6/14/16	Wed 6/15/16	CDE
474	Reporting: Individual Student Level File Electronic Reports Posted	0 days	Mon 6/20/16	Mon 6/20/16	Pearson
475	Reporting: Individual Student Level Hard Copy Reports in District	0 days	Wed 6/29/16	Wed 6/29/16	Pearson
476	**State Level Files**	**8 days**	**Wed 6/1/16**	**Fri 6/10/16**	
477	Pearson updates scoring system and produces/verifies State Level File	6 days	Wed 6/1/16	Wed 6/8/16	Pearson
478	Reporting: QC of State Level File(s) – CDE Review	2 days	Thu 6/9/16	Fri 6/10/16	CDE
479	Reporting: QC of State Level File(s) – CDE Verification	0 days	Fri 6/10/16	Fri 6/10/16	CDE
480	Reporting: State Level File(s) Posted	0 days	Fri 6/10/16	Fri 6/10/16	Pearson
481	**District Level Files**	**10 days**	**Thu 6/9/16**	**Wed 6/22/16**	
482	Reporting: QC of District Level File(s) – CDE Review	2 days	Thu 6/9/16	Fri 6/10/16	CDE
483	Reporting: QC of District Level File(s) – CDE Verification	0 days	Fri 6/10/16	Fri 6/10/16	CDE
484	Reporting: District Level File(s) Posted	0 days	Fri 6/10/16	Fri 6/10/16	Pearson
485	Reporting: District Reports Bellwethers	2 days	Thu 6/16/16	Fri 6/17/16	CDE
486	Reporting: District Electronic Reports Posted	0 days	Wed 6/22/16	Wed 6/22/16	Pearson
487	**School Level Files**	**10 days**	**Thu 6/9/16**	**Wed 6/22/16**	
488	Reporting: QC of School Level File(s) – CDE Review	2 days	Thu 6/9/16	Fri 6/10/16	CDE
489	Reporting: QC of School Level File(s) – CDE Verification	0 days	Fri 6/10/16	Fri 6/10/16	CDE
490	Reporting: School Level File(s) Posted	0 days	Fri 6/10/16	Fri 6/10/16	Pearson
491	Reporting: School Reports Bellwethers	2 days	Thu 6/16/16	Fri 6/17/16	CDE
492	Reporting: School Electronic Reports Posted	0 days	Wed 6/22/16	Wed 6/22/16	Pearson
493	**Interpretive Guide**	**65 days**	**Wed 7/1/15**	**Tue 9/29/15**	
494	Interpretive Guide review rounds	60 days	Wed 7/1/15	Tue 9/22/15	Pearson
495	Assessment Interpretive Guide – Review Final	5 days	Wed 9/23/15	Tue 9/29/15	CDE
496	Assessment Interpretive Guide Posted	0 days	Tue 9/29/15	Tue 9/29/15	Pearson
497	**Psychometric, Research, and Technical Activities**	**477 days**	**Tue 9/2/14**	**Wed 6/29/16**	
498	**Fall High School Field Test and Operational Analysis**	**191 days**	**Wed 7/1/15**	**Wed 3/23/16**	
499	Field Test- Sampling Design	60 days	Wed 7/1/15	Tue 9/22/15	Pearson
500	Psychometric Analysis of Field Test	30 days	Thu 2/11/16	Wed 3/23/16	Pearson
501	Operational Analysis	9 days	Wed 11/25/15	Mon 12/7/15	Pearson
502	CDE Review and Approval of Equating Results	1 day	Tue 12/8/15	Tue 12/8/15	CDE
503	**Spring Elem and MS Field Test and Operational Analysis**	**261 days**	**Wed 7/1/15**	**Wed 6/29/16**	
504	Field Test- Sampling Design	60 days	Wed 7/1/15	Tue 9/22/15	Pearson
505	Psychometric Analysis of Field Test	30 days	Thu 5/19/16	Wed 6/29/16	Pearson
506	Psychometric Operational Analysis (Equating)	8 days	Thu 5/19/16	Mon 5/30/16	Pearson
507	CDE Review and Approval of Equating Results	1 day	Tue 5/31/16	Tue 5/31/16	CDE
508	**TAC Meetings**	**112 days**	**Tue 9/2/14**	**Wed 2/4/15**	

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
509	TAC Meeting 1	2 days	Tue 9/2/14	Wed 9/3/14	Pearson
510	TAC Meeting 2	2 days	Tue 12/2/14	Wed 12/3/14	Pearson
511	TAC Meeting 3	2 days	Tue 2/3/15	Wed 2/4/15	Pearson
512	**Technical Reports**	**217 days**	**Fri 8/14/15**	**Mon 6/13/16**	
513	Technical Report – Final version to CDE	0 days	Fri 8/14/15	Fri 8/14/15	Pearson
514	Irregularity and Data Forensic Report - High School	10 days	Tue 12/8/15	Mon 12/21/15	Pearson
515	Irregularity and Data Forensic Report - Elementary and Middle	10 days	Tue 5/31/16	Mon 6/13/16	
516	**Training and Support**	**173 days**	**Wed 7/1/15**	**Fri 2/26/16**	
517	Understanding Assessment Results Training Materials review rounds	20 days	Wed 7/1/15	Tue 7/28/15	Pearson
518	Understanding Assessment Results Training Material - CDE Final Review	5 days	Wed 7/29/15	Tue 8/4/15	CDE
519	Understanding Assessment Results Training	5 days	Wed 8/5/15	Tue 8/11/15	Pearson
520	Technology Director Training Material review rounds	60 days	Wed 7/1/15	Tue 9/22/15	Pearson
521	Technology Director Training Material CDE Review Final	5 days	Wed 9/23/15	Tue 9/29/15	CDE
522	Conduct Technology Director Training	5 days	Tue 2/2/16	Mon 2/8/16	Pearson
523	Assessment Administration Training Material review rounds	30 days	Mon 1/4/16	Fri 2/12/16	Pearson
524	Assessment Administration Training Material CDE Review Final	5 days	Mon 2/15/16	Fri 2/19/16	CDE
525	Conduct Assessment Administration Training	5 days	Mon 2/22/16	Fri 2/26/16	Pearson
526	**Customer Service**	**261 days**	**Wed 7/1/15**	**Thu 6/30/16**	
527	Customer feedback survey	0 days	Thu 6/30/16	Thu 6/30/16	Pearson
528	Establish DAC Website	20 days	Wed 7/1/15	Tue 7/28/15	Pearson

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
0	**CO Summative - FY2017**	**782 days**	**Tue 9/2/14**	**Thu 8/31/17**	
1	**START**	**782 days**	**Tue 9/2/14**	**Thu 8/31/17**	
2	**General**	**5 days**	**Fri 7/1/16**	**Thu 7/7/16**	
3	Security Plan updated and rebaselined	5 days	Fri 7/1/16	Thu 7/7/16	Pearson
4	**Program Management**	**304 days**	**Fri 7/1/16**	**Thu 8/31/17**	
5	**Project Schedule**	**9 days**	**Fri 7/1/16**	**Wed 7/13/16**	
6	Draft Project Schedule Created	4 days	Fri 7/1/16	Wed 7/6/16	Pearson/ETS
7	Project Schedule - CDE Review	3 days	Thu 7/7/16	Mon 7/11/16	CDE
8	Project Schedule - CDE and Pearson Joint Review	1 day	Tue 7/12/16	Tue 7/12/16	Pearson/ETS/CDE
9	Project Schedule Updated and Baselined	1 day	Wed 7/13/16	Wed 7/13/16	Pearson
10	**Project Meetings**	**226 days**	**Fri 7/1/16**	**Fri 5/12/17**	
11	**Project Meeting 1**	**9 days**	**Fri 7/1/16**	**Wed 7/13/16**	
12	Agenda Drafted and Delivered to CDE	2 days	Fri 7/1/16	Mon 7/4/16	Pearson
13	Meeting held (Denver, CO)	2 days	Tue 7/5/16	Wed 7/6/16	
14	Meeting Minutes Distributed	5 days	Thu 7/7/16	Wed 7/13/16	Pearson
15	**Project Meeting 2**	**9 days**	**Thu 9/1/16**	**Tue 9/13/16**	
16	Agenda Drafted and Delivered to CDE	2 days	Thu 9/1/16	Fri 9/2/16	Pearson
17	Meeting held (Denver, CO)	2 days	Mon 9/5/16	Tue 9/6/16	
18	Meeting Minutes Distributed	5 days	Wed 9/7/16	Tue 9/13/16	Pearson
19	**Project Meeting 3 - In person**	**9 days**	**Thu 11/3/16**	**Tue 11/15/16**	
20	Agenda Drafted and Delivered to CDE	2 days	Thu 11/3/16	Fri 11/4/16	Pearson
21	Meeting held (San Antonio, TX)	2 days	Mon 11/7/16	Tue 11/8/16	
22	Meeting Minutes Distributed	5 days	Wed 11/9/16	Tue 11/15/16	Pearson
23	**Project Meeting 4**	**9 days**	**Wed 1/4/17**	**Mon 1/16/17**	
24	Agenda Drafted and Delivered to CDE	2 days	Wed 1/4/17	Thu 1/5/17	Pearson
25	Meeting held (Denver, CO)	2 days	Fri 1/6/17	Mon 1/9/17	
26	Meeting Minutes Distributed	5 days	Tue 1/10/17	Mon 1/16/17	Pearson
27	**Project Meeting 5**	**9 days**	**Thu 3/2/17**	**Tue 3/14/17**	
28	Agenda Drafted and Delivered to CDE	2 days	Thu 3/2/17	Fri 3/3/17	Pearson
29	Meeting held (Denver, CO)	2 days	Mon 3/6/17	Tue 3/7/17	
30	Meeting Minutes Distributed	5 days	Wed 3/8/17	Tue 3/14/17	Pearson
31	**Project Meeting 6 - In person**	**9 days**	**Tue 5/2/17**	**Fri 5/12/17**	
32	Agenda Drafted and Delivered to CDE	2 days	Tue 5/2/17	Wed 5/3/17	Pearson
33	Meeting held (San Antonio, TX)	2 days	Thu 5/4/17	Fri 5/5/17	
34	Meeting Minutes Distributed	5 days	Mon 5/8/17	Fri 5/12/17	Pearson
35	**Monthy Reports**	**238 days**	**Wed 7/6/16**	**Sat 6/3/17**	
36	Jul	0 days	Fri 8/5/16	Fri 8/5/16	Pearson
37	Aug	0 days	Sat 9/3/16	Sat 9/3/16	Pearson
38	Sep	0 days	Mon 10/3/16	Mon 10/3/16	Pearson
39	Oct	0 days	Sat 11/5/16	Sat 11/5/16	Pearson
40	Nov	0 days	Sat 12/3/16	Sat 12/3/16	Pearson
41	Dec	0 days	Fri 1/6/17	Fri 1/6/17	Pearson
42	Jan	0 days	Sat 2/4/17	Sat 2/4/17	Pearson
43	Feb	0 days	Sat 3/4/17	Sat 3/4/17	Pearson
44	Mar	0 days	Mon 4/3/17	Mon 4/3/17	Pearson
45	Apr	0 days	Fri 5/5/17	Fri 5/5/17	Pearson
46	May	0 days	Sat 6/3/17	Sat 6/3/17	Pearson

ID	Task Name	Duration	Start	Finish	Resource Names	
					Colorado Summative Schedule - FY2015	
47	Jun	0 days	Wed 7/6/16	Wed 7/6/16	Pearson	
48	**DAC**	**108 days**	**Fri 10/21/16**	**Tue 3/21/17**		
49	DAC Academy	2 days	Mon 2/20/17	Tue 2/21/17	Pearson	
50	DAC Management 1	2 days	Fri 10/21/16	Mon 10/24/16	Pearson	
51	DAC Management 2	2 days	Mon 3/20/17	Tue 3/21/17	Pearson	
52	**Program Improvement**	**212 days**	**Tue 9/27/16**	**Wed 7/19/17**		
53	Program Improvement Plan - Development	15 days	Mon 1/2/17	Fri 1/20/17	Pearson	
54	Program Improvement Plan - Production	15 days	Mon 2/27/17	Fri 3/17/17	Pearson	
55	Program Improvement Plan - Shipping and Receipt	15 days	Tue 3/28/17	Mon 4/17/17	Pearson	
56	Program Improvement Plan - Administration	15 days	Mon 5/1/17	Fri 5/19/17	Pearson	
57	Program Improvement Plan - Scanning	15 days	Thu 5/18/17	Wed 6/7/17	Pearson	
58	Program Improvement Plan - Scoring	15 days	Tue 6/20/17	Mon 7/10/17	Pearson	
59	Program Improvement Plan - Data Processing	15 days	Thu 6/22/17	Wed 7/12/17	Pearson	
60	Program Improvement Plan - Reporting and Psychometrics	15 days	Thu 6/29/17	Wed 7/19/17	Pearson	
61	Program Improvement Plan - Meetings	15 days	Tue 9/27/16	Mon 10/17/16	Pearson	
62	**Invoices**	**239 days**	**Fri 9/30/16**	**Thu 8/31/17**		
63	Invoice Q1	0 days	Fri 9/30/16	Fri 9/30/16	Pearson	
64	Invoice Q2	0 days	Sat 12/31/16	Sat 12/31/16	Pearson	
65	Invoice Q3	0 days	Fri 3/31/17	Fri 3/31/17	Pearson	
66	Invoice Q4	0 days	Thu 6/15/17	Thu 6/15/17	Pearson	
67	Invoice - "tail"	0 days	Thu 8/31/17	Thu 8/31/17	Pearson	
68	**Assessment Development**	**266 days**	**Thu 6/2/16**	**Thu 6/8/17**		
69	**Documents - Development Specs**	**0 days**	**Fri 7/1/16**	**Fri 7/1/16**		
70	Eligible Content Document - Final	0 days	Fri 7/1/16	Fri 7/1/16	Content	
71	Claims Document - Final	0 days	Fri 7/1/16	Fri 7/1/16	Content	
72	Reporting Categories Document - Final	0 days	Fri 7/1/16	Fri 7/1/16	Content	
73	Assessment Framework - Final	0 days	Fri 7/1/16	Fri 7/1/16	Content	
74	Performance Level Descriptors – General - Final	0 days	Fri 7/1/16	Fri 7/1/16	Content	
75	Performance Level Descriptors – Grade Level Specific - Final	0 days	Fri 7/1/16	Fri 7/1/16	Content	
76	Test Blueprints/Specifications - Final	0 days	Fri 7/1/16	Fri 7/1/16	Content	
77	**Style Guide**	**30 days**	**Fri 7/1/16**	**Thu 8/11/16**		
78	Colorado Style Guide - Draft	30 days	Fri 7/1/16	Thu 8/11/16	Content	
79	Colorado Style Guide - Final for year	0 days	Fri 7/1/16	Fri 7/1/16	Content	
80	**PE Stimuli and Storyboards**	**167 days**	**Fri 7/1/16**	**Mon 2/20/17**		
81	Recruit PE Stimuli and Storyboard Reviewers	25 days	Thu 1/5/17	Wed 2/8/17	Pearson	
82	PE Stimuli and Storyboard Develoment	100 days	Fri 7/1/16	Thu 11/17/16	Content	
83	PE Stimuli and Storyboard Selection - CDE Review	10 days	Fri 11/18/16	Thu 12/1/16	CDE	
84	Prepare PE Stimuli and Storyboard Review Training Meeting materials	5 days	Thu 1/5/17	Wed 1/11/17	Content	
85	PE Stimuli and Storyboard Review Training Meeting Materials- CDE Review	5 days	Thu 1/12/17	Wed 1/18/17	CDE	
86	Edit and ship materials after CDE review	10 days	Thu 1/19/17	Wed 2/1/17	Content	
87	PE Stimuli and Storyboard Review (Combined with another meeting)	3 days	Thu 2/9/17	Mon 2/13/17	Content	
88	Content sends final results of PE Stimuli and Storyboard Review meeting to CDE	5 days	Tue 2/14/17	Mon 2/20/17	Content	
89	**Item Development (2018 Field Test)**	**91 days**	**Thu 2/2/17**	**Thu 6/8/17**		
90	Item Writer Recruiting	25 days	Thu 2/2/17	Wed 3/8/17	Pearson	
91	Develop Training Materials and Item Development Plans	5 days	Thu 2/2/17	Wed 2/8/17	Content	
92	Item Development Meeting 1 Materials – CDE Review	5 days	Thu 2/9/17	Wed 2/15/17	CDE	
93	Edit and ship materials after CDE review	9 days	Thu 2/16/17	Tue 2/28/17	Content	

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
94	Item Development Meeting 1	3 days	Thu 3/9/17	Mon 3/13/17	Content
95	Content provides developers feedback	39 days	Tue 3/14/17	Fri 5/5/17	Content
96	Content develops training materials and item development plans (meeting 2)	5 days	Tue 3/14/17	Mon 3/20/17	Content
97	Item Writer Recruiting	25 days	Tue 3/14/17	Mon 4/17/17	Pearson
98	Item Development Meeting 2 Materials – CDE Review	3 days	Tue 3/21/17	Thu 3/23/17	CDE
99	Edit and ship materials after CDE review	10 days	Fri 3/24/17	Thu 4/6/17	Content
100	Item Development Meeting 2	3 days	Tue 4/18/17	Thu 4/20/17	Content
101	Content provides developers feedback	10 days	Fri 4/21/17	Thu 5/4/17	Content
102	Content conducts internal Content and Editorial Reviews	20 days	Fri 5/5/17	Thu 6/1/17	Content
103	Item Review – CDE Review	5 days	Fri 6/2/17	Thu 6/8/17	CDE
104	**Content and Bias Review - Science, Social Studies**	**62 days**	**Fri 7/1/16**	**Mon 9/26/16**	
105	Item Review – CDE Review (newly written items)	5 days	Fri 7/1/16	Thu 7/7/16	CDE
106	Recruit Content Review Participants	10 days	Fri 7/1/16	Thu 7/14/16	Pearson
107	Content Creates training materials for Content and PLD Meetings	10 days	Fri 7/1/16	Thu 7/14/16	Content
108	Content and PLD Meeting training Materials – CDE Review	5 days	Fri 7/15/16	Thu 7/21/16	CDE
109	Edit and ship materials after CDE review	13 days	Fri 7/22/16	Tue 8/9/16	Content
110	Content and Bias Meeting	3 days	Wed 8/10/16	Fri 8/12/16	Content
111	Content implements edits suggested by committee	30 days	Mon 8/15/16	Fri 9/23/16	Content
112	Content sends final results of Content and Bias Sensitivity Review meeting	1 day	Mon 9/26/16	Mon 9/26/16	Content
113	**Data Review**	**161 days**	**Thu 6/2/16**	**Thu 1/12/17**	
114	**Elementary/Middle**	**52 days**	**Thu 6/2/16**	**Fri 8/12/16**	
115	Recruit Data Review Participants	25 days	Thu 6/2/16	Wed 7/6/16	Pearson
116	Content Creates Data Review Training Materials	5 days	Fri 7/1/16	Thu 7/7/16	Content
117	Produce Data Review Training Materials – CDE Review	4 days	Fri 7/8/16	Wed 7/13/16	CDE
118	Edit and ship materials after CDE review	10 days	Thu 7/14/16	Wed 7/27/16	Content
119	Conduct Data Review meeting	1 day	Thu 7/28/16	Thu 7/28/16	Content
120	Content implements edits suggested by committee	10 days	Fri 7/29/16	Thu 8/11/16	Content
121	Content provides final results of Data Review Meetings	1 day	Fri 8/12/16	Fri 8/12/16	Content
122	**High School**	**31 days**	**Thu 12/1/16**	**Thu 1/12/17**	
123	Recruit Data Review Participants	25 days	Thu 12/1/16	Wed 1/4/17	
124	Content Creates Data Review Training Materials	5 days	Thu 12/1/16	Wed 12/7/16	Pearson
125	Produce Data Review Training Materials – CDE Review	4 days	Thu 12/8/16	Tue 12/13/16	CDE
126	Edit and ship materials after CDE review	10 days	Wed 12/14/16	Tue 12/27/16	Content
127	Conduct Data Review meeting	1 day	Wed 12/28/16	Wed 12/28/16	Content
128	Content implements edits suggested by committee	10 days	Thu 12/29/16	Wed 1/11/17	Content
129	Content provides final results of Data Review Meetings	1 day	Thu 1/12/17	Thu 1/12/17	Content
130	**Form Development**	**214 days**	**Fri 7/1/16**	**Wed 4/26/17**	
131	**Fall 2016 - High School**	**25 days**	**Fri 7/1/16**	**Thu 8/4/16**	
132	**Test/Ancillary Material - Development**	**25 days**	**Fri 7/1/16**	**Thu 8/4/16**	
133	District and School Assessment Coordinator review rounds	20 days	Fri 7/1/16	Thu 7/28/16	Pearson
134	Document Development: District and School Assessment Coordinators Manual – CDE Review Fina	5 days	Fri 7/29/16	Thu 8/4/16	CDE
135	Proctors Manual review rounds	20 days	Fri 7/1/16	Thu 7/28/16	Pearson
136	Document Development: Proctors Manual – CDE Review Final	5 days	Fri 7/29/16	Thu 8/4/16	CDE
137	Certification Forms review rounds	20 days	Fri 7/1/16	Thu 7/28/16	Pearson
138	Document Development: Certification Forms – CDE Review Final	5 days	Fri 7/29/16	Thu 8/4/16	CDE
139	Ancillary Materials (Manipulatives) review rounds	20 days	Fri 7/1/16	Thu 7/28/16	Pearson
140	Document Development: Ancillary Materials – CDE Review Final	5 days	Fri 7/29/16	Thu 8/4/16	CDE

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
141	Field Testing Plan	20 days	Fri 7/1/16	Thu 7/28/16	Pearson
142	**Spring 2017 - Elementary and Middle**	**156 days**	**Fri 7/1/16**	**Fri 2/3/17**	
143	**Core Test Form Development (Science, Social Studies)**	**35 days**	**Mon 8/15/16**	**Fri 9/30/16**	
149	**Embedded Field Test Form Development**	**65 days**	**Mon 10/3/16**	**Fri 12/30/16**	
155	**Special Populations**	**131 days**	**Fri 7/1/16**	**Sun 1/1/17**	
156	Accommodations Procedures Manual review rounds	60 days	Fri 7/1/16	Thu 9/22/16	Pearson
157	Accommodations Procedures Manual - CDE Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
158	**Paper and Pencil Accommodated Versions (Reuse from Spring 2015)**	**5 days**	**Fri 7/1/16**	**Thu 7/7/16**	
159	Accommodated Materials: Paper and Pencil Accommodated Forms - CDE Review Final	5 days	Fri 7/1/16	Thu 7/7/16	CDE
160	Content sends Production ready files to Pearson (Files to Print)	0 days	Thu 7/7/16	Thu 7/7/16	Content
161	**Large Print Test Form Development (Reuse from Spring 2015)**	**5 days**	**Fri 7/1/16**	**Thu 7/7/16**	
162	Accommodated Materials: Large Print - CDE Review Final	5 days	Fri 7/1/16	Thu 7/7/16	CDE
163	Content sends Production ready files to Pearson (Files to Print)	0 days	Thu 7/7/16	Thu 7/7/16	Content
164	**Braille Test Form Development (Reuse from Spring 2015)**	**0 days**	**Sun 1/1/17**	**Sun 1/1/17**	
165	Content sends Production ready files to Pearson (Files to Print)	0 days	Sun 1/1/17	Sun 1/1/17	Content
166	**English and Spanish Oral Scripts (Online and Paper/Pencil) -- Paper Reuse from Spring 2015**	**50 days**	**Mon 10/3/16**	**Fri 12/9/16**	
167	Content constructs scripts (Online Only)	30 days	Mon 10/3/16	Fri 11/11/16	Content
168	CDE reviews scripts	5 days	Mon 11/14/16	Fri 11/18/16	CDE
169	Content revises scripts based on CDE review	5 days	Mon 11/21/16	Fri 11/25/16	Content
170	Accommodated Materials: English Oral Scripts – CDE Review Final	5 days	Mon 11/28/16	Fri 12/2/16	CDE
171	Accommodated Materials: Spanish Oral Scripts – CDE Review Final	5 days	Mon 12/5/16	Fri 12/9/16	CDE
172	Content sends Production ready files to Pearson (files to print)	0 days	Fri 12/9/16	Fri 12/9/16	Content
173	**Teacher Read Directions**	**50 days**	**Mon 10/3/16**	**Fri 12/9/16**	
174	Content constructs directions	35 days	Mon 10/3/16	Fri 11/18/16	Content
175	CDE reviews directions	5 days	Mon 11/21/16	Fri 11/25/16	CDE
176	Content revises forms based on CDE review	5 days	Mon 11/28/16	Fri 12/2/16	Content
177	Accommodated Materials: Teacher Read Directions – CDE Review Final	5 days	Mon 12/5/16	Fri 12/9/16	CDE
178	Content sends Production ready files to Pearson	0 days	Fri 12/9/16	Fri 12/9/16	Content
179	**Certification for District Translators**	**65 days**	**Fri 7/1/16**	**Thu 9/29/16**	
180	Procedures documente produced	60 days	Fri 7/1/16	Thu 9/22/16	Pearson
181	Procedures for Certification for District Translators – CDE Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
182	**Test/Ancillary Material - Development**	**156 days**	**Fri 7/1/16**	**Fri 2/3/17**	
183	District and School Assessment Coordinator review rounds	20 days	Fri 7/1/16	Thu 7/28/16	Pearson
184	Document Development: District and School Assessment Coordinators Manual – CDE Review Fina	5 days	Fri 7/29/16	Thu 8/4/16	CDE
185	Proctors Manual review rounds	20 days	Mon 1/2/17	Fri 1/27/17	Pearson
186	Document Development: Proctors Manual – CDE Review Final	5 days	Mon 1/30/17	Fri 2/3/17	CDE
187	Certification Forms review rounds	20 days	Fri 7/1/16	Thu 7/28/16	Pearson
188	Document Development: Certification Forms – CDE Review Final	5 days	Fri 7/29/16	Thu 8/4/16	CDE
189	Answer Document review rounds	20 days	Fri 7/1/16	Thu 7/28/16	Pearson
190	Document Development: Answer Document Layout - CDE Review Final	5 days	Fri 7/29/16	Thu 8/4/16	CDE
191	Document Development: Test Book|Content/Answer Documents – CDE Review Final	5 days	Mon 1/9/17	Fri 1/13/17	CDE
192	Ancillary Materials (Manipulatives) review rounds	60 days	Fri 7/1/16	Thu 9/22/16	Pearson
193	Document Development: Ancillary Materials – CDE Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
194	**Fall 2017 - High School (must occur in FY17)**	**214 days**	**Fri 7/1/16**	**Wed 4/26/17**	
195	**Core Test Form Development (Science, Social Studies)**	**35 days**	**Thu 12/29/16**	**Wed 2/15/17**	
196	Content constructs forms	20 days	Thu 12/29/16	Wed 1/25/17	Content
197	CDE reviews forms	5 days	Thu 1/26/17	Wed 2/1/17	CDE

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
198	Content revises forms based on CDE review	5 days	Thu 2/2/17	Wed 2/8/17	Content
199	Core Test Form Development – CDE Review Final	5 days	Thu 2/9/17	Wed 2/15/17	CDE
200	Core Test Form Development – Final	0 days	Wed 2/15/17	Wed 2/15/17	CDE
201	**Embedded Field Test Form Development**	**45 days**	**Thu 2/16/17**	**Wed 4/19/17**	
202	Content constructs forms	30 days	Thu 2/16/17	Wed 3/29/17	Content
203	CDE reviews forms	5 days	Thu 3/30/17	Wed 4/5/17	CDE
204	Content revises forms based on CDE review	5 days	Thu 4/6/17	Wed 4/12/17	Content
205	Embedded Field Test Form Development – Final	5 days	Thu 4/13/17	Wed 4/19/17	CDE
206	Content sends Production ready files to Pearson (Files to Print)	0 days	Wed 4/19/17	Wed 4/19/17	Content
207	**Special Populations**	**214 days**	**Fri 7/1/16**	**Wed 4/26/17**	
208	Accommodations Procedures Manual review rounds	60 days	Fri 7/1/16	Thu 9/22/16	Pearson
209	Accommodations Procedures Manual - CDE Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
210	**Paper and Pencil Accommodated Versions (Reuse from Fall 2015)**	**5 days**	**Fri 7/1/16**	**Thu 7/7/16**	
211	Accommodated Materials: Paper and Pencil Accommodated Forms - CDE Review Final	5 days	Fri 7/1/16	Thu 7/7/16	CDE
212	Content sends Production ready files to Pearson (Files to Print)	0 days	Thu 7/7/16	Thu 7/7/16	Content
213	**Large Print Test Form Development (Reuse from Fall 2015)**	**5 days**	**Fri 7/1/16**	**Thu 7/7/16**	
214	Accommodated Materials: Large Print - CDE Review Final	5 days	Fri 7/1/16	Thu 7/7/16	CDE
215	Content sends Production ready files to Pearson (Files to Print)	0 days	Thu 7/7/16	Thu 7/7/16	Content
216	**Braille Test Form Development (Reuse from Fall 2015)**	**0 days**	**Fri 7/1/16**	**Fri 7/1/16**	
217	Accommodated Materials: Braille Review	0 days	Fri 7/1/16	Fri 7/1/16	CDE
218	Content sends Production ready files to Pearson (Files to Print)	0 days	Fri 7/1/16	Fri 7/1/16	Content
219	**English and Spanish Oral Scripts (Online and Paper/Pencil) -- Paper Reuse from Fall 2015**	**50 days**	**Thu 2/16/17**	**Wed 4/26/17**	
220	Content constructs scripts (Online only)	30 days	Thu 2/16/17	Wed 3/29/17	Content
221	CDE reviews scripts	5 days	Thu 3/30/17	Wed 4/5/17	CDE
222	Content revises scripts based on CDE review	5 days	Thu 4/6/17	Wed 4/12/17	Content
223	Accommodated Materials: English Oral Scripts – CDE Review Final	5 days	Thu 4/13/17	Wed 4/19/17	CDE
224	Accommodated Materials: Spanish Oral Scripts – CDE Review Final	5 days	Thu 4/20/17	Wed 4/26/17	CDE
225	Content sends Production ready files to Pearson (files to print)	0 days	Wed 4/26/17	Wed 4/26/17	Content
226	**Teacher Read Directions (Part of TAM)**	**50 days**	**Thu 2/16/17**	**Wed 4/26/17**	
227	Content constructs directions	35 days	Thu 2/16/17	Wed 4/5/17	Content
228	CDE reviews directions	5 days	Thu 4/6/17	Wed 4/12/17	CDE
229	Content revises forms based on CDE review	5 days	Thu 4/13/17	Wed 4/19/17	Content
230	Accommodated Materials: Teacher Read Directions – CDE Review Final	5 days	Thu 4/20/17	Wed 4/26/17	CDE
231	Content sends Production ready files to Pearson	0 days	Wed 4/26/17	Wed 4/26/17	Content
232	**Certification for District Translators**	**65 days**	**Fri 7/1/16**	**Thu 9/29/16**	
233	Procedures documente produced	60 days	Fri 7/1/16	Thu 9/22/16	Pearson
234	Procedures for Certification for District Translators – CDE Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
235	**Assessment Administration**	**304 days**	**Fri 7/1/16**	**Thu 8/31/17**	
236	**Fall 2016 - High School**	**120 days**	**Fri 7/1/16**	**Thu 12/15/16**	
237	**Orders for Materials**	**45 days**	**Thu 9/1/16**	**Wed 11/2/16**	
238	Materials Ordering System Operational	0 days	Thu 9/1/16	Thu 9/1/16	Pearson
239	Materials Ordering Window (SDU's)	10 days	Thu 9/1/16	Wed 9/14/16	Pearson
240	Online Rosters Generated	5 days	Thu 9/15/16	Wed 9/21/16	Pearson
241	Additional Materials Ordering Window	30 days	Thu 9/22/16	Wed 11/2/16	Pearson
242	**Test/Ancillary Material - Production**	**25 days**	**Fri 7/1/16**	**Thu 8/4/16**	
243	Proctors Manual Produced	15 days	Fri 7/1/16	Thu 7/21/16	Pearson
244	Test Bookl Content/Answer Documents Produced	25 days	Fri 7/1/16	Thu 8/4/16	Pearson

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
245	Ancillaries Produced	15 days	Fri 7/1/16	Thu 7/21/16	Pearson
246	Accommodated Materials Produced	25 days	Fri 7/1/16	Thu 8/4/16	Pearson
247	Certification Forms Produced	5 days	Fri 7/1/16	Thu 7/7/16	Pearson
248	**Packaging and Delivery**	**72 days**	**Fri 7/1/16**	**Mon 10/10/16**	
249	Colorado Districts in Shipping System	0 days	Fri 7/1/16	Fri 7/1/16	Pearson
250	Packaging Specifications Finalized	0 days	Fri 7/1/16	Fri 7/1/16	Pearson
251	Non-secure Materials Packaged	10 days	Thu 9/22/16	Wed 10/5/16	Pearson
252	Non-secure Materials Shipped	3 days	Thu 10/6/16	Mon 10/10/16	Pearson
253	Non-secure Materials in District	0 days	Mon 10/10/16	Mon 10/10/16	Pearson
254	Secure Materials Packaged	10 days	Thu 9/22/16	Wed 10/5/16	Pearson
255	Secure Materials Shipped	3 days	Thu 10/6/16	Mon 10/10/16	Pearson
256	Secure Materials in District	0 days	Mon 10/10/16	Mon 10/10/16	Pearson
257	**Test Administration**	**15 days**	**Mon 10/24/16**	**Fri 11/11/16**	
258	Operational Test Administration Window - High School Science, Social Studies	15 days	Mon 10/24/16	Fri 11/11/16	
259	**Material Return and Verification**	**77 days**	**Wed 8/31/16**	**Thu 12/15/16**	
260	To Be Scored Materials Return Shipment	0 days	Tue 11/15/16	Tue 11/15/16	Pearson
261	Not To Be Scored Materials Return Shipment	0 days	Thu 11/17/16	Thu 11/17/16	Pearson
262	Non-scored Materials Destruction	0 days	Sun 11/20/16	Sun 11/20/16	Pearson
263	Scored Materials Destruction	0 days	Wed 8/31/16	Wed 8/31/16	Pearson
264	Secure Materials Verification – Initial Report	0 days	Thu 12/1/16	Thu 12/1/16	Pearson
265	Secure Materials Verification – Weekly Report	0 days	Thu 12/8/16	Thu 12/8/16	Pearson
266	Secure Materials Verification – Final Report	0 days	Thu 12/15/16	Thu 12/15/16	Pearson
267	**Test Monitoring**	**96 days**	**Fri 7/1/16**	**Fri 11/11/16**	
268	Test Monitoring Protocol review rounds	60 days	Fri 7/1/16	Thu 9/22/16	Pearson
269	Test Monitoring Protocol – CDE Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
270	Test Monitoring Sites Selected	0 days	Fri 7/1/16	Fri 7/1/16	Pearson
271	Test Monitoring Sites Notified – TBD if needed	0 days	Fri 7/1/16	Fri 7/1/16	Pearson
272	Test Monitoring	15 days	Mon 10/24/16	Fri 11/11/16	Pearson
273	**Spring 2017 - Elementary and Middle**	**304 days**	**Fri 7/1/16**	**Thu 8/31/17**	
274	**Orders for Materials**	**60 days**	**Thu 2/2/17**	**Wed 4/26/17**	
275	Pre-ID (State SDU) File Transfer	0 days	Thu 2/2/17	Thu 2/2/17	CDE
276	Materials Ordering System Operational	0 days	Thu 2/2/17	Thu 2/2/17	Pearson
277	Materials Ordering Window (SDU's)	20 days	Thu 2/2/17	Wed 3/1/17	Pearson
278	Online Rosters Generated	5 days	Thu 3/2/17	Wed 3/8/17	Pearson
279	Additional Materials Ordering Window	35 days	Thu 3/9/17	Wed 4/26/17	Pearson
280	**Test/Ancillary Material - Production**	**146 days**	**Fri 8/5/16**	**Fri 2/24/17**	
281	Proctors Manual Produced	15 days	Mon 2/6/17	Fri 2/24/17	Pearson
282	Test Book\Content/Answer Documents Produced	25 days	Mon 1/2/17	Fri 2/3/17	Pearson
283	Ancillaries Produced	15 days	Fri 9/30/16	Thu 10/20/16	Pearson
284	Accommodated Materials Produced	25 days	Mon 1/2/17	Fri 2/3/17	Pearson
285	Certification Forms Produced	5 days	Fri 8/5/16	Thu 8/11/16	Pearson
286	**Packaging and Delivery**	**61 days**	**Mon 1/2/17**	**Mon 3/27/17**	
287	Colorado Districts in Shipping System	0 days	Thu 2/2/17	Thu 2/2/17	Pearson
288	Packaging Specifications Finalized	0 days	Mon 1/2/17	Mon 1/2/17	Pearson
289	Non-secure Materials Packaged	10 days	Thu 3/9/17	Wed 3/22/17	Pearson
290	Non-secure Materials Shipped	3 days	Thu 3/23/17	Mon 3/27/17	Pearson
291	Non-secure Materials in District	0 days	Mon 3/27/17	Mon 3/27/17	Pearson

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
				Colorado Summative Schedule - FY2015	
292	Secure Materials Packaged	10 days	Thu 3/9/17	Wed 3/22/17	Pearson
293	Secure Materials Shipped	3 days	Thu 3/23/17	Mon 3/27/17	Pearson
294	Secure Materials in District	0 days	Mon 3/27/17	Mon 3/27/17	Pearson
295	**Test Administration**	**15 days**	**Mon 4/10/17**	**Fri 4/28/17**	
296	Operational Test Administration Window - ES/MS Science, Social Studies	15 days	Mon 4/10/17	Fri 4/28/17	
297	**Material Return and Verification**	**130 days**	**Thu 3/2/17**	**Thu 8/31/17**	
298	To Be Scored Materials Return Shipment	0 days	Tue 5/2/17	Tue 5/2/17	Pearson
299	Not To Be Scored Materials Return Shipment	0 days	Thu 5/4/17	Thu 5/4/17	Pearson
300	Non-scored Materials Destruction	0 days	Thu 3/2/17	Thu 3/2/17	Pearson
301	Scored Materials Destruction	0 days	Thu 8/31/17	Thu 8/31/17	Pearson
302	Secure Materials Verification – Initial Report	0 days	Thu 5/18/17	Thu 5/18/17	Pearson
303	Secure Materials Verification – Weekly Report	0 days	Thu 5/25/17	Thu 5/25/17	Pearson
304	Secure Materials Verification – Final Report	0 days	Thu 6/1/17	Thu 6/1/17	Pearson
305	**Test Monitoring**	**216 days**	**Fri 7/1/16**	**Fri 4/28/17**	
306	Test Monitoring Protocol review rounds	60 days	Fri 7/1/16	Thu 9/22/16	Pearson
307	Test Monitoring Protocol – CDE Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
308	Test Monitoring Sites Selected	0 days	Sun 1/15/17	Sun 1/15/17	Pearson
309	Test Monitoring Sites Notified – TBD if needed	0 days	Mon 2/13/17	Mon 2/13/17	Pearson
310	Test Monitoring	15 days	Mon 4/10/17	Fri 4/28/17	Pearson
311	**Web-Based Online Test Delivery System**	**328 days**	**Mon 1/4/16**	**Wed 4/5/17**	
312	**Fall 2016 - High School**	**80 days**	**Fri 7/1/16**	**Thu 10/20/16**	
313	**Online Readiness Assessment**	**20 days**	**Mon 7/4/16**	**Fri 7/29/16**	
314	Conduct the Online Readiness Assessment	5 days	Mon 7/4/16	Fri 7/8/16	Pearson
315	Online Readiness Assessment Results	5 days	Mon 7/11/16	Fri 7/15/16	Pearson
316	Infrastructure Plan - Final	10 days	Mon 7/18/16	Fri 7/29/16	Pearson
317	**Online Tutorials**	**36 days**	**Fri 7/1/16**	**Fri 8/19/16**	
318	Online Tutorials review rounds	30 days	Mon 7/4/16	Fri 8/12/16	Pearson
319	Online Tutorials – CDE Review Final	5 days	Mon 8/15/16	Fri 8/19/16	CDE
320	Online Tutorials Available for District Use	0 days	Fri 7/1/16	Fri 7/1/16	Pearson
321	Online Accommodations Functionality document review rounds	30 days	Fri 7/1/16	Thu 8/11/16	Pearson
322	Online Accommodations Functionality – CDE Review Final	5 days	Fri 8/12/16	Thu 8/18/16	CDE
323	**Online Test Delivery**	**80 days**	**Fri 7/1/16**	**Thu 10/20/16**	
324	Online Test Delivery System Demonstration	0 days	Fri 7/1/16	Fri 7/1/16	Pearson
325	Online Test Delivery System Testing	80 days	Fri 7/1/16	Thu 10/20/16	Pearson
326	Online Test Delivery System Available for District Installation/Download	0 days	Thu 10/20/16	Thu 10/20/16	Pearson
327	Forms Loaded in Online Test Delivery System	10 days	Thu 10/6/16	Wed 10/19/16	Pearson
328	Mitigation and Contingency Plans - Final	30 days	Fri 7/1/16	Thu 8/11/16	Pearson
329	Establish Unique Log-in ID and Passwords (CDE staff, technology directors, DACs, SACs, test proctors, students)	5 days	Thu 9/22/16	Wed 9/28/16	Pearson
330	Distribute Unique Log-in ID and Passowrds (CDE staff, technology directors, DACs, SACs, test proctors, students)	1 day	Thu 9/29/16	Thu 9/29/16	Pearson
331	**Spring 2017 - Elementary and Middle**	**328 days**	**Mon 1/4/16**	**Wed 4/5/17**	
332	**Online Readiness Assessment**	**20 days**	**Mon 9/19/16**	**Fri 10/14/16**	
333	Conduct the Online Readiness Assessment	5 days	Mon 9/19/16	Fri 9/23/16	Pearson
334	Online Readiness Assessment Results	5 days	Mon 9/26/16	Fri 9/30/16	Pearson
335	Infrastructure Plan - Final	10 days	Mon 10/3/16	Fri 10/14/16	Pearson
336	**Online Tutorials**	**305 days**	**Mon 1/4/16**	**Mon 3/6/17**	

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
337	Online Tutorials review rounds	30 days	Mon 1/4/16	Fri 2/12/16	Pearson
338	Online Tutorials – CDE Review Final	5 days	Mon 2/15/16	Fri 2/19/16	CDE
339	Online Tutorials Available for District Use	0 days	Mon 3/6/17	Mon 3/6/17	Pearson
340	Online Accommodations Functionality document review rounds	60 days	Fri 7/1/16	Thu 9/22/16	Pearson
341	Online Accommodations Functionality – CDE Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
342	**Online Test Delivery**	**199 days**	**Fri 7/1/16**	**Wed 4/5/17**	
343	Online Test Delivery System Demonstration	0 days	Mon 8/1/16	Mon 8/1/16	Pearson
344	Online Test Delivery System Testing	80 days	Mon 8/1/16	Fri 11/18/16	Pearson
345	Online Test Delivery System Available for District Installation/Download	0 days	Fri 11/18/16	Fri 11/18/16	Pearson
346	Forms Loaded in Online Test Delivery System	10 days	Thu 3/23/17	Wed 4/5/17	Pearson
347	Mitigation and Contingency Plans - Final	30 days	Fri 7/1/16	Thu 8/11/16	Pearson
348	Establish Unique Log-in ID and Passwords (CDE staff, technology directors, DACs, SACs, test proctors, students)	5 days	Thu 3/9/17	Wed 3/15/17	Pearson
349	Distribute Unique Log-in ID and Passowrds (CDE staff, technology directors, DACs, SACs, test proctors, students)	1 day	Thu 3/16/17	Thu 3/16/17	Pearson
350	**Scanning and Scoring**	**254 days**	**Fri 7/1/16**	**Wed 6/21/17**	
351	**Fall 2016 - High School**	**161 days**	**Fri 7/1/16**	**Fri 2/10/17**	
352	**Scoring Processes**	**161 days**	**Fri 7/1/16**	**Fri 2/10/17**	
353	Scanning Specifications review rounds	20 days	Fri 7/1/16	Thu 7/28/16	Pearson
354	Scanning Specifications – CDE Review Final	5 days	Fri 7/29/16	Thu 8/4/16	CDE
355	Materials Scanned	10 days	Wed 11/16/16	Tue 11/29/16	Pearson
356	Key Verification – CDE Review	2 days	Wed 11/30/16	Thu 12/1/16	CDE
357	Alerts Resolved and Clean Post	10 days	Wed 11/16/16	Tue 11/29/16	Pearson
358	Pearson Scoring System (ePEN) in Production	0 days	Fri 11/11/16	Fri 11/11/16	Pearson
359	**Operational Scoring**	**103 days**	**Fri 7/1/16**	**Tue 11/22/16**	
360	Scoring Staff Requirements Established	0 days	Fri 7/1/16	Fri 7/1/16	Pearson
361	Scoring Staff Recruitment and Hiring	20 days	Mon 10/24/16	Fri 11/18/16	Pearson
362	**Operational Scoring Training Materials**	**25 days**	**Mon 10/10/16**	**Fri 11/11/16**	
363	Pearson creates draft training materials	15 days	Mon 10/10/16	Fri 10/28/16	Pearson
364	CDE reviews/approves	5 days	Mon 10/31/16	Fri 11/4/16	CDE
365	Pearson updates training materials	5 days	Mon 11/7/16	Fri 11/11/16	Pearson
366	Open Ended Training Material Approved	0 days	Fri 11/11/16	Fri 11/11/16	Pearson
367	Operational Scoring Window	7 days	Mon 11/14/16	Tue 11/22/16	Pearson
368	**Field Test Scoring**	**40 days**	**Thu 12/15/16**	**Wed 2/8/17**	
369	**Rangefinding**	**20 days**	**Thu 12/15/16**	**Wed 1/11/17**	
370	Recruit Rangefinding Participants	20 days	Thu 12/15/16	Wed 1/11/17	Pearson
371	Rangefinding Meeting	3 days	Mon 1/9/17	Wed 1/11/17	Pearson
372	Scoring Training Materials review rounds	10 days	Thu 1/12/17	Wed 1/25/17	Pearson
373	Scoring Training Materials – CDE Review Final	3 days	Thu 1/26/17	Mon 1/30/17	CDE
374	Field Test Scoring Window	7 days	Tue 1/31/17	Wed 2/8/17	Pearson
375	Scoring Site Scheduled Visit - CDE	2 days	Thu 2/9/17	Fri 2/10/17	CDE
376	**Scoring Specifications**	**35 days**	**Fri 7/1/16**	**Thu 8/18/16**	
377	Reliability and Validity Scoring Specification/Procedures review rounds	30 days	Fri 7/1/16	Thu 8/11/16	Pearson
378	Reliability and Validity Scoring Specification/Procedures - CDE Review Final	5 days	Fri 8/12/16	Thu 8/18/16	CDE
379	Procedures for Unusual Responses - review rounds	30 days	Fri 7/1/16	Thu 8/11/16	Pearson
380	Procedures for Unusual Responses - CDE Review Final	5 days	Fri 8/12/16	Thu 8/18/16	CDE
381	Rescoring Specifications/Procedures review rounds	30 days	Fri 7/1/16	Thu 8/11/16	Pearson

					Colorado Summative Schedule - FY2015
ID	Task Name	Duration	Start	Finish	Resource Names
382	Rescoring Specifications/Procedures - CDE Review Final	5 days	Fri 8/12/16	Thu 8/18/16	CDE
383	**Spring 2017 - Elementary and Middle**	**254 days**	**Fri 7/1/16**	**Wed 6/21/17**	
384	**Scoring Processes**	**254 days**	**Fri 7/1/16**	**Wed 6/21/17**	
385	Scanning Specifications review rounds	20 days	Fri 7/1/16	Thu 7/28/16	Pearson
386	Scanning Specifications – CDE Review Final	5 days	Fri 7/29/16	Thu 8/4/16	CDE
387	Materials Scanned	10 days	Thu 5/4/17	Wed 5/17/17	Pearson
388	Key Verification – CDE Review	2 days	Thu 5/18/17	Fri 5/19/17	CDE
389	Alerts Resolved and Clean Post	10 days	Thu 5/4/17	Wed 5/17/17	Pearson
390	Pearson Scoring System (ePEN) in Production	0 days	Fri 4/28/17	Fri 4/28/17	
391	**Operational Scoring**	**229 days**	**Fri 7/1/16**	**Wed 5/17/17**	
392	Scoring Staff Requirements Established	0 days	Fri 7/1/16	Fri 7/1/16	Pearson
393	Scoring Staff Recruitment and Hiring	20 days	Mon 4/10/17	Fri 5/5/17	Pearson
394	**Operational Scoring Training Materials**	**25 days**	**Mon 1/2/17**	**Fri 2/3/17**	
395	Pearson creates draft training materials	15 days	Mon 1/2/17	Fri 1/20/17	Pearson
396	CDE reviews/approves	5 days	Mon 1/23/17	Fri 1/27/17	CDE
397	Pearson updates training materials	5 days	Mon 1/30/17	Fri 2/3/17	Pearson
398	Open Ended Training Material Approved	0 days	Fri 2/3/17	Fri 2/3/17	
399	Operational Scoring Window	10 days	Thu 5/4/17	Wed 5/17/17	Pearson
400	**Field Test Scoring**	**252 days**	**Fri 7/1/16**	**Mon 6/19/17**	
401	Recruit Rangefinding Participants	20 days	Thu 4/20/17	Wed 5/17/17	Pearson
402	Rangefinding Meeting	3 days	Thu 5/18/17	Mon 5/22/17	Pearson
403	Scoring Staff Requirements Established	0 days	Fri 7/1/16	Fri 7/1/16	Pearson
404	Scoring Staff Recruitment and Hiring	20 days	Thu 4/20/17	Wed 5/17/17	Pearson
405	Scoring Training Materials review rounds	10 days	Tue 5/23/17	Mon 6/5/17	Pearson
406	Scoring Training Materials – CDE Review Final	3 days	Tue 6/6/17	Thu 6/8/17	CDE
407	Scoring Window	7 days	Fri 6/9/17	Mon 6/19/17	Pearson
408	Scoring Site Scheduled Visit - CDE	2 days	Tue 6/20/17	Wed 6/21/17	CDE
409	**Scoring Specifications**	**35 days**	**Fri 7/1/16**	**Thu 8/18/16**	
410	Reliability and Validity Scoring Specification/Procedures review rounds	30 days	Fri 7/1/16	Thu 8/11/16	Pearson
411	Reliability and Validity Scoring Specification/Procedures - CDE Review Final	5 days	Fri 8/12/16	Thu 8/18/16	CDE
412	Procedures for Unusual Responses - review rounds	30 days	Fri 7/1/16	Thu 8/11/16	Pearson
413	Procedures for Unusual Responses - CDE Review Final	5 days	Fri 8/12/16	Thu 8/18/16	CDE
414	Rescoring Specifications/Procedures review rounds	30 days	Fri 7/1/16	Thu 8/11/16	Pearson
415	Rescoring Specifications/Procedures - CDE Review Final	5 days	Fri 8/12/16	Thu 8/18/16	CDE
416	**Reporting of Data Files and Assessment Results**	**259 days**	**Fri 7/1/16**	**Wed 6/28/17**	
417	**Reporting Files - Specs**	**65 days**	**Fri 7/1/16**	**Thu 9/29/16**	
418	Reporting: Data File Layout review rounds	45 days	Fri 7/1/16	Thu 9/1/16	Pearson
419	Reporting: Score Report Shells review rounds	60 days	Fri 7/1/16	Thu 9/22/16	Pearson
420	Reporting: Individual Student Level File Layout - CDE Review Final	5 days	Fri 9/2/16	Thu 9/8/16	CDE
421	Reporting: Individual Student Level Report Shells – CDE Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
422	Reporting: State Level File Layouts – CDE Review Final	5 days	Fri 9/2/16	Thu 9/8/16	CDE
423	Reporting: District Level File Layouts – CDE Review Final	5 days	Fri 9/2/16	Thu 9/8/16	CDE
424	Reporting: District Level Report Shells – CDE Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
425	Reporting: School Level File Layouts – CDE Review Final	5 days	Fri 9/2/16	Thu 9/8/16	CDE
426	Reporting: School Level Report Shells – CDE Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
427	**Fall 2016 - High School**	**129 days**	**Fri 7/1/16**	**Wed 12/28/16**	
428	**Reports**	**33 days**	**Mon 11/14/16**	**Wed 12/28/16**	

			Colorado Summative Schedule - FY2015		
ID	Task Name	Duration	Start	Finish	Resource Names
429	Student Biographical Data Review Window	10 days	Mon 11/14/16	Fri 11/25/16	
430	**Operational Reporting - Science, Social Studies**	**16 days**	**Wed 12/7/16**	**Wed 12/28/16**	
431	Reporting: QC of Individual Student Level File – CDE Review	1 day	Wed 12/7/16	Wed 12/7/16	CDE
432	Reporting: QC of Individual Student Level File – CDE Verification	0 days	Wed 12/7/16	Wed 12/7/16	CDE
433	Reporting: Individual Student Level File Posted	0 days	Wed 12/7/16	Wed 12/7/16	Pearson
434	Reporting: Individual Student Report Bellwethers	2 days	Tue 12/13/16	Wed 12/14/16	CDE
435	Reporting: Individual Student Level File Electronic Reports Posted	0 days	Mon 12/19/16	Mon 12/19/16	Pearson
436	Reporting: Individual Student Level Hard Copy Reports in District	0 days	Wed 12/28/16	Wed 12/28/16	Pearson
437	**State Level Files**	**8 days**	**Wed 12/7/16**	**Fri 12/16/16**	
438	Pearson updates scoring system and produces/verifies State Level File	6 days	Wed 12/7/16	Wed 12/14/16	Pearson
439	Reporting: QC of State Level File(s) – CDE Review	2 days	Thu 12/15/16	Fri 12/16/16	CDE
440	Reporting: QC of State Level File(s) – CDE Verification	0 days	Fri 12/16/16	Fri 12/16/16	CDE
441	Reporting: State Level File(s) Posted	0 days	Fri 12/16/16	Fri 12/16/16	Pearson
442	**District Level Files**	**10 days**	**Thu 12/15/16**	**Wed 12/28/16**	
443	Reporting: QC of District Level File(s) – CDE Review	2 days	Thu 12/15/16	Fri 12/16/16	CDE
444	Reporting: QC of District Level File(s) – CDE Verification	0 days	Fri 12/16/16	Fri 12/16/16	CDE
445	Reporting: District Level File(s) Posted	0 days	Fri 12/16/16	Fri 12/16/16	Pearson
446	Reporting: District Reports Bellwethers	2 days	Thu 12/22/16	Fri 12/23/16	CDE
447	Reporting: District Electronic Reports Posted	0 days	Wed 12/28/16	Wed 12/28/16	Pearson
448	**School Level Files**	**10 days**	**Thu 12/15/16**	**Wed 12/28/16**	
449	Reporting: QC of School Level File(s) – CDE Review	2 days	Thu 12/15/16	Fri 12/16/16	CDE
450	Reporting: QC of School Level File(s) – CDE Verification	0 days	Fri 12/16/16	Fri 12/16/16	CDE
451	Reporting: School Level File(s) Posted	0 days	Fri 12/16/16	Fri 12/16/16	Pearson
452	Reporting: School Reports Bellwethers	2 days	Thu 12/22/16	Fri 12/23/16	CDE
453	Reporting: School Electronic Reports Posted	0 days	Wed 12/28/16	Wed 12/28/16	Pearson
454	**Interpretive Guide**	**65 days**	**Fri 7/1/16**	**Thu 9/29/16**	
455	Interpretive Guide review rounds	60 days	Fri 7/1/16	Thu 9/22/16	Pearson
456	Assessment Interpretive Guide – Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
457	Assessment Interpretive Guide Posted	0 days	Thu 9/29/16	Thu 9/29/16	Pearson
458	**Spring 2017 - Elementary and Middle**	**259 days**	**Fri 7/1/16**	**Wed 6/28/17**	
459	**Reports**	**30 days**	**Thu 5/18/17**	**Wed 6/28/17**	
460	Student Biographical Data Review Window	10 days	Thu 5/18/17	Wed 5/31/17	
461	**Operational Reporting - Science, Social Studies**	**16 days**	**Wed 6/7/17**	**Wed 6/28/17**	
462	Reporting: QC of Individual Student Level File – CDE Review	1 day	Wed 6/7/17	Wed 6/7/17	CDE
463	Reporting: QC of Individual Student Level File – CDE Verification	0 days	Wed 6/7/17	Wed 6/7/17	CDE
464	Reporting: Individual Student Level File Posted	0 days	Wed 6/7/17	Wed 6/7/17	Pearson
465	Reporting: Individual Student Report Bellwethers	2 days	Tue 6/13/17	Wed 6/14/17	CDE
466	Reporting: Individual Student Level File Electronic Reports Posted	0 days	Mon 6/19/17	Mon 6/19/17	Pearson
467	Reporting: Individual Student Level Hard Copy Reports in District	0 days	Wed 6/28/17	Wed 6/28/17	Pearson
468	**State Level Files**	**8 days**	**Wed 5/31/17**	**Fri 6/9/17**	
469	Pearson updates scoring system and produces/verifies State Level File	6 days	Wed 5/31/17	Wed 6/7/17	Pearson
470	Reporting: QC of State Level File(s) – CDE Review	2 days	Thu 6/8/17	Fri 6/9/17	CDE
471	Reporting: QC of State Level File(s) – CDE Verification	0 days	Fri 6/9/17	Fri 6/9/17	CDE
472	Reporting: State Level File(s) Posted	0 days	Fri 6/9/17	Fri 6/9/17	Pearson
473	**District Level Files**	**10 days**	**Thu 6/8/17**	**Wed 6/21/17**	
474	Reporting: QC of District Level File(s) – CDE Review	2 days	Thu 6/8/17	Fri 6/9/17	CDE
475	Reporting: QC of District Level File(s) – CDE Verification	0 days	Fri 6/9/17	Fri 6/9/17	CDE

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
476	Reporting: District Level File(s) Posted	0 days	Fri 6/9/17	Fri 6/9/17	Pearson
477	Reporting: District Reports Bellwethers	2 days	Thu 6/15/17	Fri 6/16/17	CDE
478	Reporting: District Electronic Reports Posted	0 days	Wed 6/21/17	Wed 6/21/17	Pearson
479	**School Level Files**	**10 days**	**Thu 6/8/17**	**Wed 6/21/17**	
480	Reporting: QC of School Level File(s) – CDE Review	2 days	Thu 6/8/17	Fri 6/9/17	CDE
481	Reporting: QC of School Level File(s) – CDE Verification	0 days	Fri 6/9/17	Fri 6/9/17	CDE
482	Reporting: School Level File(s) Posted	0 days	Fri 6/9/17	Fri 6/9/17	Pearson
483	Reporting: School Reports Bellwethers	2 days	Thu 6/15/17	Fri 6/16/17	CDE
484	Reporting: School Electronic Reports Posted	0 days	Wed 6/21/17	Wed 6/21/17	Pearson
485	**Interpretive Guide**	**65 days**	**Fri 7/1/16**	**Thu 9/29/16**	
486	Interpretive Guide review rounds	60 days	Fri 7/1/16	Thu 9/22/16	Pearson
487	Assessment Interpretive Guide – Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
488	Assessment Interpretive Guide Posted	0 days	Thu 9/29/16	Thu 9/29/16	Pearson
489	**Psychometric, Research, and Technical Activities**	**737 days**	**Tue 9/2/14**	**Wed 6/28/17**	
490	**Fall High School Field Test and Operational Analysis**	**189 days**	**Fri 7/1/16**	**Wed 3/22/17**	
491	Field Test- Sampling Design	60 days	Fri 7/1/16	Thu 9/22/16	Pearson
492	Psychometric Analysis of Field Test	30 days	Thu 2/9/17	Wed 3/22/17	Pearson
493	Operational Analysis	9 days	Wed 11/23/16	Mon 12/5/16	Pearson
494	CDE Review and Approval of Equating Results	1 day	Tue 12/6/16	Tue 12/6/16	CDE
495	**Spring Elem and MS Field Test and Operational Analysis**	**259 days**	**Fri 7/1/16**	**Wed 6/28/17**	
496	Field Test- Sampling Design	60 days	Fri 7/1/16	Thu 9/22/16	Pearson
497	Psychometric Analysis of Field Test	30 days	Thu 5/18/17	Wed 6/28/17	Pearson
498	Psychometric Operational Analysis (Equating)	8 days	Thu 5/18/17	Mon 5/29/17	Pearson
499	CDE Review and Approval of Equating Results	1 day	Tue 5/30/17	Tue 5/30/17	CDE
500	**TAC Meetings**	**112 days**	**Tue 9/2/14**	**Wed 2/4/15**	
501	TAC Meeting 1	2 days	Tue 9/2/14	Wed 9/3/14	Pearson
502	TAC Meeting 2	2 days	Tue 12/2/14	Wed 12/3/14	Pearson
503	TAC Meeting 3	2 days	Tue 2/3/15	Wed 2/4/15	Pearson
504	**Technical Reports**	**477 days**	**Fri 8/14/15**	**Mon 6/12/17**	
505	Technical Report – Final version to CDE	0 days	Fri 8/14/15	Fri 8/14/15	Pearson
506	Irregularity and Data Forensic Report - High School	10 days	Tue 12/6/16	Mon 12/19/16	Pearson
507	Irregularity and Data Forensic Report - Elementary and Middle	10 days	Tue 5/30/17	Mon 6/12/17	
508	**Training and Support**	**173 days**	**Fri 7/1/16**	**Tue 2/28/17**	
509	Understanding Assessment Results Training Materials review rounds	20 days	Fri 7/1/16	Thu 7/28/16	Pearson
510	Understanding Assessment Results Training Material - CDE Final Review	5 days	Fri 7/29/16	Thu 8/4/16	CDE
511	Understanding Assessment Results Training	5 days	Fri 8/5/16	Thu 8/11/16	Pearson
512	Technology Director Training Material review rounds	60 days	Fri 7/1/16	Thu 9/22/16	Pearson
513	Technology Director Training Material CDE Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
514	Conduct Technology Director Training	5 days	Thu 2/2/17	Wed 2/8/17	Pearson
515	Assessment Administration Training Material review rounds	30 days	Wed 1/4/17	Tue 2/14/17	Pearson
516	Assessment Administration Training Material CDE Review Final	5 days	Wed 2/15/17	Tue 2/21/17	CDE
517	Conduct Assessment Administration Training	5 days	Wed 2/22/17	Tue 2/28/17	Pearson
518	**Customer Service**	**260 days**	**Fri 7/1/16**	**Fri 6/30/17**	
519	Customer feedback survey	0 days	Fri 6/30/17	Fri 6/30/17	Pearson
520	Establish DAC Website	20 days	Fri 7/1/16	Thu 7/28/16	Pearson

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
0	**CO Alternate - FY2018**	**1113 days**	**Sat 12/14/13**	**Wed 3/21/18**	
1	**START**	**1113 days**	**Sat 12/14/13**	**Wed 3/21/18**	
2	**General**	**5 days**	**Mon 7/3/17**	**Fri 7/7/17**	
3	Security Plan updated and rebaselined	5 days	Mon 7/3/17	Fri 7/7/17	Pearson
4	**Program Management**	**268 days**	**Fri 1/6/17**	**Tue 1/16/18**	
5	**Project Schedule**	**9 days**	**Mon 7/3/17**	**Thu 7/13/17**	
6	Draft Project Schedule Created	4 days	Mon 7/3/17	Thu 7/6/17	Pearson/ETS
7	Project Schedule - CDE Review	3 days	Fri 7/7/17	Tue 7/11/17	CDE
8	Project Schedule - CDE and Pearson Joint Review	1 day	Wed 7/12/17	Wed 7/12/17	Pearson/ETS/CDE
9	Project Schedule Updated and Baselined	1 day	Thu 7/13/17	Thu 7/13/17	Pearson
10	**Project Meetings**	**142 days**	**Mon 7/3/17**	**Tue 1/16/18**	
11	**Project Meeting 1**	**9 days**	**Mon 7/3/17**	**Thu 7/13/17**	
12	Agenda Drafted and Delivered to CDE	2 days	Mon 7/3/17	Tue 7/4/17	Pearson
13	Meeting held (Denver, CO)	2 days	Wed 7/5/17	Thu 7/6/17	
14	Meeting Minutes Distributed	5 days	Fri 7/7/17	Thu 7/13/17	Pearson
15	**Project Meeting 2**	**9 days**	**Fri 9/1/17**	**Wed 9/13/17**	
16	Agenda Drafted and Delivered to CDE	2 days	Fri 9/1/17	Mon 9/4/17	Pearson
17	Meeting held (Denver, CO)	2 days	Tue 9/5/17	Wed 9/6/17	
18	Meeting Minutes Distributed	5 days	Thu 9/7/17	Wed 9/13/17	Pearson
19	**Project Meeting 3 - In person**	**9 days**	**Fri 11/3/17**	**Wed 11/15/17**	
20	Agenda Drafted and Delivered to CDE	2 days	Fri 11/3/17	Mon 11/6/17	Pearson
21	Meeting held (San Antonio, TX)	2 days	Tue 11/7/17	Wed 11/8/17	
22	Meeting Minutes Distributed	5 days	Thu 11/9/17	Wed 11/15/17	Pearson
23	**Project Meeting 4**	**9 days**	**Thu 1/4/18**	**Tue 1/16/18**	
24	Agenda Drafted and Delivered to CDE	2 days	Thu 1/4/18	Fri 1/5/18	Pearson
25	Meeting held (Denver, CO)	2 days	Mon 1/8/18	Tue 1/9/18	
26	Meeting Minutes Distributed	5 days	Wed 1/10/18	Tue 1/16/18	Pearson
27	**Monthy Reports**	**236 days**	**Fri 1/6/17**	**Sun 12/3/17**	
28	Jul	0 days	Sat 8/5/17	Sat 8/5/17	Pearson
29	Aug	0 days	Sun 9/3/17	Sun 9/3/17	Pearson
30	Sep	0 days	Tue 10/3/17	Tue 10/3/17	Pearson
31	Oct	0 days	Sun 11/5/17	Sun 11/5/17	Pearson
32	Nov	0 days	Sun 12/3/17	Sun 12/3/17	Pearson
33	Dec	0 days	Fri 1/6/17	Fri 1/6/17	Pearson
34	**DAC**	**2 days**	**Mon 10/23/17**	**Tue 10/24/17**	
35	DAC Management 1	2 days	Mon 10/23/17	Tue 10/24/17	Pearson
36	**Invoices**	**65 days**	**Sat 9/30/17**	**Sun 12/31/17**	
37	Invoice Q1	0 days	Sat 9/30/17	Sat 9/30/17	Pearson
38	Invoice Q2	0 days	Sun 12/31/17	Sun 12/31/17	Pearson
39	**Assessment Development**	**161 days**	**Fri 6/2/17**	**Fri 1/12/18**	
40	**Style Guide**	**30 days**	**Sat 7/1/17**	**Fri 8/11/17**	
41	Colorado Style Guide - Draft	30 days	Mon 7/3/17	Fri 8/11/17	Content
42	Colorado Style Guide - Final for year	0 days	Sat 7/1/17	Sat 7/1/17	Content
43	**Content and Bias Review - Science, Social Studies**	**62 days**	**Mon 7/3/17**	**Tue 9/26/17**	
44	Item Review – CDE Review (newly written items)	5 days	Mon 7/3/17	Fri 7/7/17	CDE
45	Recruit Content Review Participants	10 days	Mon 7/3/17	Fri 7/14/17	Pearson
46	Content Creates training materials for Content and PLD Meetings	10 days	Mon 7/3/17	Fri 7/14/17	Content

ID	Task Name	Duration	Start	Finish	Resource Names
				Colorado Alternate Schedule - FY2018	
47	Content and PLD Meeting training Materials – CDE Review	5 days	Mon 7/17/17	Fri 7/21/17	CDE
48	Edit and ship materials after CDE review	13 days	Mon 7/24/17	Wed 8/9/17	Content
49	Content and Bias Meeting	3 days	Thu 8/10/17	Mon 8/14/17	Content
50	Content implements edits suggested by committee	30 days	Tue 8/15/17	Mon 9/25/17	Content
51	Content sends final results of Content and Bias Sensitivity Review meeting	1 day	Tue 9/26/17	Tue 9/26/17	Content
52	**Data Review**	**161 days**	**Fri 6/2/17**	**Fri 1/12/18**	
53	**Elementary/Middle (Virtual)**	**52 days**	**Fri 6/2/17**	**Mon 8/14/17**	
54	Recruit Data Review Participants	25 days	Fri 6/2/17	Thu 7/6/17	Pearson
55	Content Creates Data Review Training Materials	5 days	Mon 7/3/17	Fri 7/7/17	Content
56	Produce Data Review Training Materials – CDE Review	4 days	Mon 7/10/17	Thu 7/13/17	CDE
57	Edit and ship materials after CDE review	10 days	Fri 7/14/17	Thu 7/27/17	Content
58	Conduct Data Review meeting	1 day	Fri 7/28/17	Fri 7/28/17	Content
59	Content implements edits suggested by committee	10 days	Mon 7/31/17	Fri 8/11/17	Content
60	Content provides final results of Data Review Meetings	1 day	Mon 8/14/17	Mon 8/14/17	Content
61	**High School (Virtual)**	**31 days**	**Fri 12/1/17**	**Fri 1/12/18**	
62	Recruit Data Review Participants	25 days	Fri 12/1/17	Thu 1/4/18	Pearson
63	Content Creates Data Review Training Materials	5 days	Fri 12/1/17	Thu 12/7/17	Pearson
64	Produce Data Review Training Materials – CDE Review	4 days	Fri 12/8/17	Wed 12/13/17	CDE
65	Edit and ship materials after CDE review	10 days	Thu 12/14/17	Wed 12/27/17	Content
66	Conduct Data Review meeting	1 day	Thu 12/28/17	Thu 12/28/17	Content
67	Content implements edits suggested by committee	10 days	Fri 12/29/17	Thu 1/11/18	Content
68	Content provides final results of Data Review Meetings	1 day	Fri 1/12/18	Fri 1/12/18	Content
69	**Form Development**	**25 days**	**Mon 7/3/17**	**Fri 8/4/17**	
70	**Fall 2017 - High School**	**25 days**	**Mon 7/3/17**	**Fri 8/4/17**	
71	**Test/Ancillary Material - Development**	**25 days**	**Mon 7/3/17**	**Fri 8/4/17**	
72	District and School Assessment Coordinator review rounds	20 days	Mon 7/3/17	Fri 7/28/17	Pearson
73	Document Development: District and School Assessment Coordinators Manual – CDE Review Final	5 days	Mon 7/31/17	Fri 8/4/17	CDE
74	Ancillary Materials (Manipulatives) review rounds	20 days	Mon 7/3/17	Fri 7/28/17	Pearson
75	Document Development: Ancillary Materials – CDE Review Final	5 days	Mon 7/31/17	Fri 8/4/17	CDE
76	Field Testing Plan	20 days	Mon 7/3/17	Fri 7/28/17	Pearson
77	**Assessment Administration**	**119 days**	**Sat 7/1/17**	**Thu 12/14/17**	
78	**Fall 2017 - High School**	**119 days**	**Sat 7/1/17**	**Thu 12/14/17**	
79	**Orders for Materials**	**45 days**	**Fri 9/1/17**	**Thu 11/2/17**	
80	Materials Ordering System Operational	0 days	Fri 9/1/17	Fri 9/1/17	Pearson
81	Materials Ordering Window (SDU's)	10 days	Fri 9/1/17	Thu 9/14/17	Pearson
82	Online Rosters Generated	5 days	Fri 9/15/17	Thu 9/21/17	Pearson
83	Additional Materials Ordering Window	30 days	Fri 9/22/17	Thu 11/2/17	Pearson
84	**Test/Ancillary Material - Production**	**25 days**	**Mon 7/3/17**	**Fri 8/4/17**	
85	Test Book\Content Produced	25 days	Mon 7/3/17	Fri 8/4/17	Pearson
86	Ancillaries Produced	15 days	Mon 7/3/17	Fri 7/21/17	Pearson
87	**Packaging and Delivery**	**72 days**	**Sat 7/1/17**	**Tue 10/10/17**	
88	Colorado Districts in Shipping System	0 days	Sat 7/1/17	Sat 7/1/17	Pearson
89	Packaging Specifications Finalized	0 days	Sat 7/1/17	Sat 7/1/17	Pearson
90	Non-secure Materials Packaged	10 days	Fri 9/22/17	Thu 10/5/17	Pearson
91	Non-secure Materials Shipped	3 days	Fri 10/6/17	Tue 10/10/17	Pearson
92	Non-secure Materials in District	0 days	Tue 10/10/17	Tue 10/10/17	Pearson
93	Secure Materials Packaged	10 days	Fri 9/22/17	Thu 10/5/17	Pearson

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
94	Secure Materials Shipped	3 days	Fri 10/6/17	Tue 10/10/17	Pearson
95	Secure Materials in District	0 days	Tue 10/10/17	Tue 10/10/17	Pearson
96	**Test Administration**	**15 days**	**Mon 10/23/17**	**Fri 11/10/17**	
97	Operational Test Administration Window and Score Entry Window- High School Science, Social Studies	15 days	Mon 10/23/17	Fri 11/10/17	
98	**Material Return and Verification**	**20 days**	**Thu 11/16/17**	**Thu 12/14/17**	
99	Not To Be Scored Materials Return Shipment	0 days	Thu 11/16/17	Thu 11/16/17	Pearson
100	Non-scored Materials Destruction	0 days	Mon 11/20/17	Mon 11/20/17	Pearson
101	Secure Materials Verification – Initial Report	0 days	Thu 11/30/17	Thu 11/30/17	Pearson
102	Secure Materials Verification – Weekly Report	0 days	Thu 12/7/17	Thu 12/7/17	Pearson
103	Secure Materials Verification – Final Report	0 days	Thu 12/14/17	Thu 12/14/17	Pearson
104	**Test Monitoring**	**95 days**	**Sat 7/1/17**	**Fri 11/10/17**	
105	Test Monitoring Protocol review rounds	60 days	Mon 7/3/17	Fri 9/22/17	Pearson
106	Test Monitoring Protocol – CDE Review Final	5 days	Mon 9/25/17	Fri 9/29/17	CDE
107	Test Monitoring Sites Selected	0 days	Sat 7/1/17	Sat 7/1/17	Pearson
108	Test Monitoring Sites Notified – TBD if needed	0 days	Sat 7/1/17	Sat 7/1/17	Pearson
109	Test Monitoring	15 days	Mon 10/23/17	Fri 11/10/17	Pearson
110	**Scanning and Scoring**	**295 days**	**Mon 10/3/16**	**Fri 11/17/17**	
111	**Fall 2017 - High School**	**295 days**	**Mon 10/3/16**	**Fri 11/17/17**	
112	**Scoring Processes - Fall 2017**	**295 days**	**Mon 10/3/16**	**Fri 11/17/17**	
113	Scoring Procedures review rounds	40 days	Mon 7/3/17	Fri 8/25/17	Pearson
114	Scoring Procedures - CDE Review Final	5 days	Mon 8/28/17	Fri 9/1/17	CDE
115	Scoring Materials review rounds	50 days	Mon 9/4/17	Fri 11/10/17	Pearson
116	Scoring Materials - CDE Review Final	5 days	Mon 11/13/17	Fri 11/17/17	CDE
117	Scoring Monitors Recruitment	25 days	Mon 7/3/17	Fri 8/4/17	Pearson
118	Scoring Monitors Training	3 days	Mon 8/7/17	Wed 8/9/17	Pearson
119	**Online Score Submission System**	**66 days**	**Mon 7/3/17**	**Mon 10/2/17**	
120	Baseline System Requirements	30 days	Mon 7/3/17	Fri 8/11/17	Pearson
121	System developed, tested, reviewed with CDE	30 days	Mon 8/14/17	Fri 9/22/17	Pearson
122	Online Score Submission System - CDE Final Review	5 days	Mon 9/25/17	Fri 9/29/17	CDE
123	Create and Generate Teacher User ID's and Passwords	1 day	Mon 10/2/17	Mon 10/2/17	Pearson
124	Online Score Submission System - GO LIVE	0 days	Mon 10/2/17	Mon 10/2/17	Pearson
125	Scoring Guidance Document review rounds	60 days	Mon 10/3/16	Fri 12/23/16	Pearson
126	Scoring Guidance Document - CDE review	5 days	Mon 12/26/16	Fri 12/30/16	CDE
127	Scoring Guidance - Available to Classroom Teachers	0 days	Fri 12/30/16	Fri 12/30/16	Pearson
128	**Reporting of Data Files and Assessment Results**	**1053 days**	**Sat 12/14/13**	**Wed 12/27/17**	
129	**Reporting Files - Specs**	**65 days**	**Mon 7/3/17**	**Fri 9/29/17**	
130	Reporting: Data File Layout review rounds	45 days	Mon 7/3/17	Fri 9/1/17	Pearson
131	Reporting: Score Report Shells review rounds	60 days	Mon 7/3/17	Fri 9/22/17	Pearson
132	Reporting: Individual Student Level File Layout - CDE Review Final	5 days	Mon 9/4/17	Fri 9/8/17	CDE
133	Reporting: Individual Student Level Report Shells – CDE Review Final	5 days	Mon 9/25/17	Fri 9/29/17	CDE
134	Reporting: State Level File Layouts – CDE Review Final	5 days	Mon 9/4/17	Fri 9/8/17	CDE
135	Reporting: District Level File Layouts – CDE Review Final	5 days	Mon 9/4/17	Fri 9/8/17	CDE
136	Reporting: District Level Report Shells – CDE Review Final	5 days	Mon 9/25/17	Fri 9/29/17	CDE
137	Reporting: School Level File Layouts – CDE Review Final	5 days	Mon 9/4/17	Fri 9/8/17	CDE
138	Reporting: School Level Report Shells – CDE Review Final	5 days	Mon 9/25/17	Fri 9/29/17	CDE
139	**Fall 2016 - High School**	**1053 days**	**Sat 12/14/13**	**Wed 12/27/17**	
140	**Reports**	**23 days**	**Mon 11/27/17**	**Wed 12/27/17**	

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
141	Student Biographical Data Review Window	10 days	Mon 11/27/17	Fri 12/8/17	
142	**Operational Reporting - Science, Social Studies**	**16 days**	**Wed 12/6/17**	**Wed 12/27/17**	
143	Reporting: QC of Individual Student Level File – CDE Review	1 day	Wed 12/6/17	Wed 12/6/17	CDE
144	Reporting: QC of Individual Student Level File – CDE Verification	0 days	Wed 12/6/17	Wed 12/6/17	CDE
145	Reporting: Individual Student Level File Posted	0 days	Wed 12/6/17	Wed 12/6/17	Pearson
146	Reporting: Individual Student Report Bellwethers	2 days	Tue 12/12/17	Wed 12/13/17	CDE
147	Reporting: Individual Student Level File Electronic Reports Posted	0 days	Mon 12/18/17	Mon 12/18/17	Pearson
148	Reporting: Individual Student Level Hard Copy Reports in District	0 days	Wed 12/27/17	Wed 12/27/17	Pearson
149	**State Level Files**	**9 days**	**Wed 12/6/17**	**Mon 12/18/17**	
150	Pearson updates scoring system and produces/verifies State Level File	6 days	Wed 12/6/17	Wed 12/13/17	Pearson
151	Reporting: QC of State Level File(s) – CDE Review	2 days	Fri 12/15/17	Mon 12/18/17	CDE
152	Reporting: QC of State Level File(s) – CDE Verification	0 days	Mon 12/18/17	Mon 12/18/17	CDE
153	Reporting: State Level File(s) Posted	0 days	Mon 12/18/17	Mon 12/18/17	Pearson
154	**District Level Files**	**10 days**	**Sat 12/14/13**	**Fri 12/27/13**	
155	Reporting: QC of District Level File(s) – CDE Review	2 days	Sat 12/14/13	Tue 12/17/13	CDE
156	Reporting: QC of District Level File(s) – CDE Verification	0 days	Tue 12/17/13	Tue 12/17/13	CDE
157	Reporting: District Level File(s) Posted	0 days	Tue 12/17/13	Tue 12/17/13	Pearson
158	Reporting: District Reports Bellwethers	2 days	Mon 12/23/13	Tue 12/24/13	CDE
159	Reporting: District Electronic Reports Posted	0 days	Fri 12/27/13	Fri 12/27/13	Pearson
160	**School Level Files**	**10 days**	**Thu 12/14/17**	**Wed 12/27/17**	
161	Reporting: QC of School Level File(s) – CDE Review	2 days	Thu 12/14/17	Fri 12/15/17	CDE
162	Reporting: QC of School Level File(s) – CDE Verification	0 days	Fri 12/15/17	Fri 12/15/17	CDE
163	Reporting: School Level File(s) Posted	0 days	Fri 12/15/17	Fri 12/15/17	Pearson
164	Reporting: School Reports Bellwethers	2 days	Thu 12/21/17	Fri 12/22/17	CDE
165	Reporting: School Electronic Reports Posted	0 days	Wed 12/27/17	Wed 12/27/17	Pearson
166	**Interpretive Guide**	**65 days**	**Mon 7/3/17**	**Fri 9/29/17**	
167	Interpretive Guide review rounds	60 days	Mon 7/3/17	Fri 9/22/17	Pearson
168	Assessment Interpretive Guide – Review Final	5 days	Mon 9/25/17	Fri 9/29/17	CDE
169	Assessment Interpretive Guide Posted	0 days	Fri 9/29/17	Fri 9/29/17	Pearson
170	**Psychometric, Research, and Technical Activities**	**158 days**	**Mon 8/14/17**	**Wed 3/21/18**	
171	**Fall High School Field Test and Operational Analysis**	**86 days**	**Wed 11/22/17**	**Wed 3/21/18**	
172	Psychometric Analysis of Field Test (2/8/18)	30 days	Thu 2/8/18	Wed 3/21/18	Pearson
173	Operational Analysis	9 days	Wed 11/22/17	Mon 12/4/17	Pearson
174	CDE Review and Approval of Equating Results	1 day	Tue 12/5/17	Tue 12/5/17	CDE
175	**TAC Meetings**	**67 days**	**Mon 9/4/17**	**Tue 12/5/17**	
176	TAC Meeting 1	2 days	Mon 9/4/17	Tue 9/5/17	Pearson
177	TAC Meeting 2	2 days	Mon 12/4/17	Tue 12/5/17	Pearson
178	**Technical Reports**	**91 days**	**Mon 8/14/17**	**Mon 12/18/17**	
179	Technical Report – Final version to CDE	0 days	Mon 8/14/17	Mon 8/14/17	Pearson
180	Irregularity and Data Forensic Report	10 days	Tue 12/5/17	Mon 12/18/17	Pearson
181	**Training and Support**	**65 days**	**Mon 7/3/17**	**Fri 9/29/17**	
182	Understanding Assessment Results Training Materials review rounds	20 days	Mon 7/3/17	Fri 7/28/17	Pearson
183	Understanding Assessment Results Training Material - CDE Final Review	5 days	Mon 7/31/17	Fri 8/4/17	CDE
184	Understanding Assessment Results Training	5 days	Mon 8/7/17	Fri 8/11/17	Pearson
185	Technology Director Training Material review rounds	60 days	Mon 7/3/17	Fri 9/22/17	Pearson
186	Technology Director Training Material CDE Review Final	5 days	Mon 9/25/17	Fri 9/29/17	CDE
187	**Customer Service**	**129 days**	**Mon 7/3/17**	**Fri 12/29/17**	

ID	Task Name	Duration	Start	Finish	Resource Names
				Colorado Alternate Schedule - FY2018	
188	Customer feedback survey	0 days	Fri 12/29/17	Fri 12/29/17	Pearson
189	Establish DAC Website	20 days	Mon 7/3/17	Fri 7/28/17	Pearson

EXHIBIT B

ID	Task Name	Duration	Predecessors	Start	Finish	Resource Names
0	**CO Alternate Assessment - FY2015**	**587 days?**		**Mon 6/2/14**	**Wed 8/31/16**	
1	**START**	**587 days?**		**Mon 6/2/14**	**Wed 8/31/16**	
2	**General**	**5 days**		**Tue 7/1/14**	**Mon 7/7/14**	
3	Security Plan updated and rebaselined	5 days		Tue 7/1/14	Mon 7/7/14	Pearson
4	**Program Management**	**304 days**		**Tue 7/1/14**	**Mon 8/31/15**	
5	**Project Schedule**	**9 days**		**Tue 7/1/14**	**Fri 7/11/14**	
6	Draft Project Schedule Created	4 days		Tue 7/1/14	Fri 7/4/14	Pearson
7	Project Schedule - CDE Review	3 days	6	Mon 7/7/14	Wed 7/9/14	CDE
8	Project Schedule - CDE and Pearson Joint Review	1 day	7	Thu 7/10/14	Thu 7/10/14	Pearson/CDE
9	Project Schedule Updated and Baselined	1 day	8	Fri 7/11/14	Fri 7/11/14	Pearson
10	**Project Meetings**	**232 days**		**Tue 7/1/14**	**Wed 5/20/15**	
11	**Project Meeting 1**	**12 days**		**Tue 7/1/14**	**Wed 7/16/14**	
12	Agenda Drafted and Delivered to CDE	2 days		Tue 7/1/14	Wed 7/2/14	Pearson
13	Meeting held (Denver, CO)	2 days		Tue 7/8/14	Wed 7/9/14	
14	Meeting Minutes Distributed	5 days	13	Thu 7/10/14	Wed 7/16/14	Pearson
15	**Project Meeting 2**	**13 days**		**Mon 9/1/14**	**Wed 9/17/14**	
16	Agenda Drafted and Delivered to CDE	2 days		Mon 9/1/14	Tue 9/2/14	Pearson
17	Meeting held (Denver, CO)	2 days		Tue 9/9/14	Wed 9/10/14	
18	Meeting Minutes Distributed	5 days	17	Thu 9/11/14	Wed 9/17/14	Pearson
19	**Project Meeting 3 - In person**	**13 days**		**Mon 11/3/14**	**Wed 11/19/14**	
20	Agenda Drafted and Delivered to CDE	2 days		Mon 11/3/14	Tue 11/4/14	Pearson
21	Meeting held (San Antonio, TX)	2 days		Tue 11/11/14	Wed 11/12/14	
22	Meeting Minutes Distributed	5 days	21	Thu 11/13/14	Wed 11/19/14	Pearson
23	**Project Meeting 4**	**14 days**		**Fri 1/2/15**	**Wed 1/21/15**	
24	Agenda Drafted and Delivered to CDE	2 days		Fri 1/2/15	Mon 1/5/15	Pearson
25	Meeting held (Denver, CO)	2 days		Tue 1/13/15	Wed 1/14/15	
26	Meeting Minutes Distributed	5 days	25	Thu 1/15/15	Wed 1/21/15	Pearson
27	**Project Meeting 5**	**13 days**		**Mon 3/2/15**	**Wed 3/18/15**	
28	Agenda Drafted and Delivered to CDE	2 days		Mon 3/2/15	Tue 3/3/15	Pearson
29	Meeting held (Denver, CO)	2 days		Tue 3/10/15	Wed 3/11/15	
30	Meeting Minutes Distributed	5 days	29	Thu 3/12/15	Wed 3/18/15	Pearson
31	**Project Meeting 6 - In person**	**14 days**		**Fri 5/1/15**	**Wed 5/20/15**	
32	Agenda Drafted and Delivered to CDE	2 days		Fri 5/1/15	Mon 5/4/15	Pearson
33	Meeting held (San Antonio, TX)	2 days		Tue 5/12/15	Wed 5/13/15	
34	Meeting Minutes Distributed	5 days	33	Thu 5/14/15	Wed 5/20/15	Pearson
35	**Monthy Reports**	**239 days**		**Tue 8/5/14**	**Mon 7/6/15**	
36	Jul	0 days		Tue 8/5/14	Tue 8/5/14	Pearson
37	Aug	0 days		Wed 9/3/14	Wed 9/3/14	Pearson
38	Sep	0 days		Fri 10/3/14	Fri 10/3/14	Pearson
39	Oct	0 days		Wed 11/5/14	Wed 11/5/14	Pearson
40	Nov	0 days		Wed 12/3/14	Wed 12/3/14	Pearson
41	Dec	0 days		Tue 1/6/15	Tue 1/6/15	Pearson
42	Jan	0 days		Wed 2/4/15	Wed 2/4/15	Pearson
43	Feb	0 days		Wed 3/4/15	Wed 3/4/15	Pearson
44	Mar	0 days		Fri 4/3/15	Fri 4/3/15	Pearson
45	Apr	0 days		Tue 5/5/15	Tue 5/5/15	Pearson
46	May	0 days		Wed 6/3/15	Wed 6/3/15	Pearson

ID	Task Name	Duration	Predecessors	Start	Finish	Resource Names
						Colorado Alternate Schedule - FY2015
47	Jun	0 days		Mon 7/6/15	Mon 7/6/15	Pearson
48	**DAC**	**108 days**		**Tue 10/21/14**	**Thu 3/19/15**	
49	DAC Academy	2 days		Wed 2/18/15	Thu 2/19/15	Pearson
50	DAC Management 1	2 days		Tue 10/21/14	Wed 10/22/14	Pearson
51	DAC Management 2	2 days		Wed 3/18/15	Thu 3/19/15	Pearson
52	**Program Improvement**	**239 days**		**Tue 7/1/14**	**Fri 5/29/15**	
53	Program Improvement Plan - Development	15 days	133	Wed 12/17/14	Tue 1/6/15	Pearson
54	Program Improvement Plan - Production	15 days	205	Mon 1/12/15	Fri 1/30/15	Pearson
55	Program Improvement Plan - Shipping and Receipt	15 days	210	Thu 3/26/15	Wed 4/15/15	Pearson
56	Program Improvement Plan - Administration	15 days	219	Mon 5/11/15	Fri 5/29/15	Pearson
57	Program Improvement Plan - Scanning	15 days		Tue 7/1/14	Mon 7/21/14	Pearson
58	Program Improvement Plan - Scoring	15 days	248	Wed 10/15/14	Tue 11/4/14	Pearson
59	Program Improvement Plan - Data Processing	15 days	238	Tue 8/26/14	Mon 9/15/14	Pearson
60	Program Improvement Plan - Reporting and Psychometrics	15 days	281	Wed 1/21/15	Tue 2/10/15	Pearson
61	Program Improvement Plan - Meetings	15 days	87	Fri 9/12/14	Thu 10/2/14	Pearson
62	**Invoices**	**239 days**		**Tue 9/30/14**	**Mon 8/31/15**	
63	Invoice Q1	0 days		Tue 9/30/14	Tue 9/30/14	Pearson
64	Invoice Q2	0 days		Wed 12/31/14	Wed 12/31/14	Pearson
65	Invoice Q3	0 days		Tue 3/31/15	Tue 3/31/15	Pearson
66	Invoice Q4	0 days		Mon 6/15/15	Mon 6/15/15	Pearson
67	Invoice - "tail"	0 days		Mon 8/31/15	Mon 8/31/15	Pearson
68	**Assessment Development**	**309 days**		**Mon 6/2/14**	**Thu 8/6/15**	
69	**Style Guide**	**30 days**		**Tue 7/1/14**	**Mon 8/11/14**	
70	Colorado Style Guide - Draft	30 days		Tue 7/1/14	Mon 8/11/14	Pearson
71	Colorado Style Guide - Final for year	0 days		Tue 7/1/14	Tue 7/1/14	Pearson
72	**Item Development (Spring 2016 Field Test)**	**288 days**		**Tue 7/1/14**	**Thu 8/6/15**	
73	Item Writer Recruiting	25 days		Mon 2/2/15	Fri 3/6/15	Pearson
74	Develop Training Materials and Item Development Plans	5 days		Wed 2/25/15	Tue 3/3/15	Pearson
75	Item Development Meeting 1 Materials – CDE Review	5 days		Wed 3/4/15	Tue 3/10/15	CDE
76	Edit and ship materials after CDE review	9 days		Wed 3/11/15	Mon 3/23/15	Pearson
77	Item Development Meeting 1	2 days		Tue 3/24/15	Wed 3/25/15	Pearson
78	Provide developers feedback	39 days		Fri 3/27/15	Wed 5/20/15	Pearson
79	Develop training materials and item development plans (meeting 2)	5 days		Tue 7/1/14	Mon 7/7/14	Pearson
80	Item Writer Recruiting	25 days		Fri 5/1/15	Thu 6/4/15	Pearson
81	Item Development Meeting 2 Materials – CDE Review	3 days		Thu 5/28/15	Mon 6/1/15	CDE
82	Edit and ship materials after CDE review	10 days		Tue 6/2/15	Mon 6/15/15	Pearson
83	Item Development Meeting 2	2 days		Tue 6/16/15	Wed 6/17/15	Pearson
84	Provide developers feedback	10 days		Fri 6/19/15	Thu 7/2/15	Pearson
85	Conduct internal Content and Editorial Reviews	20 days		Fri 7/3/15	Thu 7/30/15	Pearson
86	Item Review – CDE Review	5 days		Fri 7/31/15	Thu 8/6/15	CDE
87	**Content Review - SS and SC and PLD Meeting (Spring 2015 Field Test)**	**61 days**		**Thu 6/19/14**	**Thu 9/11/14**	
88	Item Review – CDE Review (newly written items)	5 days		Tue 7/1/14	Mon 7/7/14	CDE
89	Recruit Content Review Participants	10 days		Tue 7/1/14	Mon 7/14/14	Pearson
90	Create training materials for Content and PLD Meetings	10 days		Thu 6/19/14	Wed 7/2/14	Pearson
91	Content and PLD Meeting training Materials – CDE Review	5 days		Thu 7/3/14	Wed 7/9/14	CDE
92	Edit and ship materials after CDE review	13 days		Thu 7/10/14	Mon 7/28/14	Pearson
93	Content and PLD Meeting	2 days		Tue 7/29/14	Wed 7/30/14	Pearson

					Colorado Alternate Schedule - FY2015		
ID	Task Name	Duration	Predecessors	Start	Finish	Resource Names	
94	Implement edits suggested by committee	30 days		Fri 8/1/14	Thu 9/11/14	Pearson	
95	**Bias and Sensitivity Review**	**62 days**		**Thu 6/19/14**	**Fri 9/12/14**		
96	Recruit Content Review Participants	10 days		Tue 7/1/14	Mon 7/14/14	Pearson	
97	Create training materials for Bias and sensitivity Reviews	10 days		Thu 6/19/14	Wed 7/2/14	Pearson	
98	Bias and Sensitivity Review training materials – CDE Review	5 days		Thu 7/3/14	Wed 7/9/14	CDE	
99	Edit and ship materials after CDE review	13 days		Thu 7/10/14	Mon 7/28/14	Pearson	
100	Bias and Sensitivity Review Meeting	1 day		Thu 7/31/14	Thu 7/31/14	Pearson	
101	Implements edits suggested by committee	30 days		Mon 8/4/14	Fri 9/12/14	Pearson	
102	Send final results of Content and Bias Sensitivity Review meeting	1 day		Thu 8/7/14	Thu 8/7/14	Pearson	
103	**Data Review (2014 operational)**	**176 days**		**Mon 6/2/14**	**Mon 2/2/15**		
104	**ES/MS**	**38 days**		**Mon 6/2/14**	**Wed 7/23/14**		
105	Recruit Data Review Participants	25 days		Mon 6/2/14	Fri 7/4/14	Pearson	
106	Print Data Review Training Materials	5 days		Wed 6/11/14	Tue 6/17/14	Pearson	
107	Produce Data Review Training Materials – CDE Review	4 days	106	Wed 6/18/14	Mon 6/23/14	CDE	
108	Edit and ship materials after CDE review	10 days	107	Tue 6/24/14	Mon 7/7/14	Pearson	
109	Conduct Data Review meeting	1 day	108	Tue 7/8/14	Tue 7/8/14	Pearson	
110	Implement edits suggested by committee	10 days	109	Wed 7/9/14	Tue 7/22/14	Pearson	
111	Provide final results of Data Review Meetings	1 day	110	Wed 7/23/14	Wed 7/23/14	Pearson	
112	**High School**	**46 days**	111	**Mon 12/1/14**	**Mon 2/2/15**		
113	Recruit Data Review Participants	25 days		Mon 12/1/14	Fri 1/2/15	Pearson	
114	Print Data Review Training Materials	5 days		Mon 12/22/14	Fri 12/26/14	Pearson	
115	Produce Data Review Training Materials – CDE Review	4 days	114	Mon 12/29/14	Thu 1/1/15	CDE	
116	Edit and ship materials after CDE review	10 days	115	Fri 1/2/15	Thu 1/15/15	Pearson	
117	Conduct Data Review meeting	1 day	116	Fri 1/16/15	Fri 1/16/15	Pearson	
118	Implement edits suggested by committee	10 days	117	Mon 1/19/15	Fri 1/30/15	Pearson	
119	Provide final results of Data Review Meetings	1 day	118	Mon 2/2/15	Mon 2/2/15	Pearson	
120	**Form Development (2015 Operational, Breach Forms, and Stand Alone Field Test)**	**259 days**		**Tue 7/1/14**	**Fri 6/26/15**		
121	**Spring 2015**	**131 days**		**Tue 7/1/14**	**Tue 12/30/14**		
122	**Core Test Form Development (Science and Social Studies)**	**49 days**		**Thu 7/24/14**	**Tue 9/30/14**		
123	Construct forms	34 days	111	Thu 7/24/14	Tue 9/9/14	Pearson	
124	CDE reviews forms	5 days	123	Wed 9/10/14	Tue 9/16/14	CDE	
125	Revise forms based on CDE review	5 days	124	Wed 9/17/14	Tue 9/23/14	Pearson	
126	Core Test Form Development – CDE Review Final	5 days	125	Wed 9/24/14	Tue 9/30/14	CDE	
127	Core Test Form Development – Final	0 days	126	Tue 9/30/14	Tue 9/30/14	Pearson	
128	**Embedded Field Test Form Development**	**55 days**		**Wed 10/1/14**	**Tue 12/16/14**		
129	Construct forms	40 days	127	Wed 10/1/14	Tue 11/25/14	Pearson	
130	CDE reviews forms	5 days	129	Wed 11/26/14	Tue 12/2/14	CDE	
131	Revise forms based on CDE review	5 days	130	Wed 12/3/14	Tue 12/9/14	Pearson	
132	Embedded Field Test Form Development – Final	5 days	131	Wed 12/10/14	Tue 12/16/14	CDE	
133	Production ready fiiles to print	0 days	132	Tue 12/16/14	Tue 12/16/14	Pearson	
134	**Test/Ancillary Material - Development--Spring and Fall**	**131 days**		**Tue 7/1/14**	**Tue 12/30/14**		
135	District and School Assessment Coordinator manual review rounds	60 days		Tue 7/1/14	Mon 9/22/14	Pearson	
136	Document Development: District and School Assessment Coordinators Manual – CDE Revie	5 days	135	Tue 9/23/14	Mon 9/29/14	CDE	
137	Examiners Manual review rounds	30 days		Mon 10/20/14	Fri 11/28/14	Pearson	
138	Document Development: Examiners Manual – CDE Review Final	5 days	137	Mon 12/1/14	Fri 12/5/14	CDE	
139	Certification Forms review rounds	60 days		Tue 7/1/14	Mon 9/22/14	Pearson	
140	Document Development: Certification Forms – CDE Review Final	5 days	139	Tue 9/23/14	Mon 9/29/14	CDE	

EXHIBIT B

ID	Task Name	Duration	Predecessors	Start	Finish	Resource Names
141	Document Development: Test Booklets – CDE Review Final	5 days	32FS+5 days	Wed 12/24/14	Tue 12/30/14	CDE
142	Ancillary Materials (Manipulatives) review rounds	60 days		Tue 7/1/14	Mon 9/22/14	Pearson
143	Document Development: Ancillary Materials – CDE Review Final	5 days	142	Tue 9/23/14	Mon 9/29/14	CDE
144	**Fall 2015**	**259 days**		**Tue 7/1/14**	**Fri 6/26/15**	
145	**Core Test Form Development (Science and Social Studies)**	**49 days**		**Tue 2/3/15**	**Fri 4/10/15**	
146	Construct forms	34 days	119	Tue 2/3/15	Fri 3/20/15	Pearson
147	CDE reviews forms	5 days	146	Mon 3/23/15	Fri 3/27/15	CDE
148	Revise forms based on CDE review	5 days	147	Mon 3/30/15	Fri 4/3/15	Pearson
149	Core Test Form Development – CDE Review Final	5 days	148	Mon 4/6/15	Fri 4/10/15	CDE
150	Core Test Form Development – Final	0 days	149	Fri 4/10/15	Fri 4/10/15	Pearson
151	**Embedded Field Test Form Development**	**55 days**		**Mon 4/13/15**	**Fri 6/26/15**	
152	Construct forms	40 days	150	Mon 4/13/15	Fri 6/5/15	Pearson
153	CDE reviews forms	5 days	152	Mon 6/8/15	Fri 6/12/15	CDE
154	Revise forms based on CDE review	5 days	153	Mon 6/15/15	Fri 6/19/15	Pearson
155	Embedded Field Test Form Development – Final	5 days	154	Mon 6/22/15	Fri 6/26/15	CDE
156	Production ready fiiles to print	0 days	155	Fri 6/26/15	Fri 6/26/15	Pearson
157	**Certification for District Translators**	**65 days**		**Tue 7/1/14**	**Mon 9/29/14**	
158	Procedures document produced	60 days		Tue 7/1/14	Mon 9/22/14	Pearson
159	Procedures for Certification for District Translators – CDE Review Final	5 days	158	Tue 9/23/14	Mon 9/29/14	CDE
160	**Assessment Administration**	**566 days**		**Tue 7/1/14**	**Wed 8/31/16**	
161	**Fall 2014**	**566 days**		**Tue 7/1/14**	**Wed 8/31/16**	
162	**Orders for Materials**	**45 days**		**Mon 9/1/14**	**Fri 10/31/14**	
163	Pre-ID File Transfer	0 days		Mon 9/1/14	Mon 9/1/14	CDE
164	Materials Ordering System Operational	0 days		Mon 9/1/14	Mon 9/1/14	Pearson
165	Materials Ordering Window	15 days	164	Mon 9/1/14	Fri 9/19/14	Pearson
166	Online Rosters Generated	5 days	165	Mon 9/22/14	Fri 9/26/14	Pearson
167	Additional Materials Ordering Window	30 days		Mon 9/22/14	Fri 10/31/14	Pearson
168	**Test/Ancillary Material - Production**	**20 days**		**Tue 7/1/14**	**Mon 7/28/14**	
169	Examiners Manual Produced	15 days		Tue 7/1/14	Mon 7/21/14	Pearson
170	Test Booklets/Answer Documents Produced	20 days		Tue 7/1/14	Mon 7/28/14	Pearson
171	Ancillaries Produced	15 days		Tue 7/1/14	Mon 7/21/14	Pearson
172	Certification Forms Produced	5 days		Tue 7/1/14	Mon 7/7/14	Pearson
173	**Packaging and Delivery**	**72 days**		**Tue 7/1/14**	**Wed 10/8/14**	
174	Colorado Districts in Shipping System	0 days		Tue 7/1/14	Tue 7/1/14	Pearson
175	Packaging Specifications Finalized	0 days		Tue 7/1/14	Tue 7/1/14	Pearson
176	Non-secure Materials Packaged	10 days	170	Mon 9/22/14	Fri 10/3/14	Pearson
177	Non-secure Materials Shipped	3 days	176	Mon 10/6/14	Wed 10/8/14	Pearson
178	Non-secure Materials in District	0 days	177	Wed 10/8/14	Wed 10/8/14	Pearson
179	Secure Materials Packaged	10 days	170	Mon 9/22/14	Fri 10/3/14	Pearson
180	Secure Materials Shipped	3 days	176	Mon 10/6/14	Wed 10/8/14	Pearson
181	Secure Materials in District	0 days	177	Wed 10/8/14	Wed 10/8/14	Pearson
182	**Test Administration**	**15 days**		**Mon 10/27/14**	**Fri 11/14/14**	
183	Operational Test Administration Window - Science and Social Studies	15 days		Mon 10/27/14	Fri 11/14/14	
184	Online Score Submission Window	15 days	183SS	Mon 10/27/14	Fri 11/14/14	
185	**Material Return and Verification**	**463 days**		**Thu 11/20/14**	**Wed 8/31/16**	
186	Not To Be Scored Materials Return Shipment	0 days	83FS+4 days	Thu 11/20/14	Thu 11/20/14	Pearson
187	Non-scored Materials Destruction	0 days		Fri 11/20/15	Fri 11/20/15	Pearson

						Colorado Alternate Schedule - FY2015
ID	Task Name	Duration	Predecessors	Start	Finish	Resource Names
188	Scored Materials Destruction	0 days		Wed 8/31/16	Wed 8/31/16	Pearson
189	Secure Materials Verification – Initial Report	0 days	6FS+10 days	Thu 12/4/14	Thu 12/4/14	Pearson
190	Secure Materials Verification – Weekly Report	0 days	89FS+5 days	Thu 12/11/14	Thu 12/11/14	Pearson
191	Secure Materials Verification – Final Report	0 days	90FS+5 days	Thu 12/18/14	Thu 12/18/14	Pearson
192	**Test Monitoring**	**104 days**		**Tue 7/1/14**	**Fri 11/21/14**	
193	Test Monitoring Protocol review rounds	60 days		Tue 7/1/14	Mon 9/22/14	Pearson
194	Test Monitoring Protocol – CDE Review Final	5 days	193	Tue 9/23/14	Mon 9/29/14	CDE
195	Test Monitoring Sites Selected	0 days	183SS-2 wks	Mon 10/13/14	Mon 10/13/14	Pearson
196	Test Monitoring Sites Notified – TBD if needed	0 days	195	Mon 10/13/14	Mon 10/13/14	Pearson
197	Test Monitoring	20 days	183SS	Mon 10/27/14	Fri 11/21/14	Pearson
198	**Spring 2015**	**566 days**		**Tue 7/1/14**	**Wed 8/31/16**	
199	**Orders for Materials**	**45 days**		**Mon 2/2/15**	**Fri 4/3/15**	
200	Pre-ID File Transfer	0 days		Mon 2/2/15	Mon 2/2/15	CDE
201	Materials Ordering System Operational	0 days		Mon 2/2/15	Mon 2/2/15	Pearson
202	Materials Ordering Window (SDUs)	20 days	201	Mon 2/2/15	Fri 2/27/15	Pearson
203	Online Rosters Generated	5 days	202	Mon 3/2/15	Fri 3/6/15	Pearson
204	Additional Materials Ordering Window	20 days	203	Mon 3/9/15	Fri 4/3/15	Pearson
205	**Test/Ancillary Material - Production**	**74 days**		**Tue 9/30/14**	**Fri 1/9/15**	
206	Examiners Manual Produced	25 days	138	Mon 12/8/14	Fri 1/9/15	Pearson
207	Test Booklets/Answer Documents Produced	15 days	133	Wed 12/17/14	Tue 1/6/15	Pearson
208	Ancillaries Produced	15 days	143	Tue 9/30/14	Mon 10/20/14	Pearson
209	Certification Forms Produced	5 days	140	Tue 9/30/14	Mon 10/6/14	Pearson
210	**Packaging and Delivery**	**59 days**		**Fri 1/2/15**	**Wed 3/25/15**	
211	Colorado Districts in Shipping System	0 days	200	Mon 2/2/15	Mon 2/2/15	Pearson
212	Packaging Specifications Finalized	0 days		Fri 1/2/15	Fri 1/2/15	Pearson
213	Non-secure Materials Packaged	10 days	207,203	Mon 3/9/15	Fri 3/20/15	Pearson
214	Non-secure Materials Shipped	3 days	213	Mon 3/23/15	Wed 3/25/15	Pearson
215	Non-secure Materials in District	0 days	214	Wed 3/25/15	Wed 3/25/15	Pearson
216	Secure Materials Packaged	10 days	207,203	Mon 3/9/15	Fri 3/20/15	Pearson
217	Secure Materials Shipped	3 days	213	Mon 3/23/15	Wed 3/25/15	Pearson
218	Secure Materials in District	0 days	214	Wed 3/25/15	Wed 3/25/15	Pearson
219	**Test Administration**	**20 days**		**Mon 4/13/15**	**Fri 5/8/15**	
220	Operational Test Administration Window - Science and Social Studies	20 days		Mon 4/13/15	Fri 5/8/15	
221	Online Score Submission Window	20 days	220SS	Mon 4/13/15	Fri 5/8/15	
222	**Material Return and Verification**	**340 days**		**Tue 5/12/15**	**Wed 8/31/16**	
223	To Be Scored Materials Return Shipment	0 days	20FS+2 days	Tue 5/12/15	Tue 5/12/15	Pearson
224	Not To Be Scored Materials Return Shipment	0 days	20FS+2 days	Tue 5/12/15	Tue 5/12/15	Pearson
225	Non-scored Materials Destruction	0 days		Wed 3/2/16	Wed 3/2/16	Pearson
226	Scored Materials Destruction	0 days		Wed 8/31/16	Wed 8/31/16	Pearson
227	Secure Materials Verification – Initial Report	0 days	4FS+10 days	Tue 5/26/15	Tue 5/26/15	Pearson
228	Secure Materials Verification – Weekly Report	0 days	27FS+5 days	Tue 6/2/15	Tue 6/2/15	Pearson
229	Secure Materials Verification – Final Report	0 days	28FS+5 days	Tue 6/9/15	Tue 6/9/15	Pearson
230	**Test Monitoring**	**224 days**		**Tue 7/1/14**	**Fri 5/8/15**	
231	Test Monitoring Protocol review rounds	60 days		Tue 7/1/14	Mon 9/22/14	Pearson
232	Test Monitoring Protocol – CDE Review Final	5 days	231	Tue 9/23/14	Mon 9/29/14	CDE
233	Test Monitoring Sites Selected	0 days		Thu 1/15/15	Thu 1/15/15	Pearson
234	Test Monitoring Sites Notified – TBD if needed	0 days		Fri 2/13/15	Fri 2/13/15	Pearson

					Colorado Alternate Schedule - FY2015	
ID	Task Name	Duration	Predecessors	Start	Finish	Resource Names
235	Test Monitoring	20 days	220SS	Mon 4/13/15	Fri 5/8/15	Pearson
236	**Scoring**	**261 days**		**Tue 7/1/14**	**Tue 6/30/15**	
237	**Fall 2014**	**261 days**		**Tue 7/1/14**	**Tue 6/30/15**	
238	Scoring Procedures review rounds	40 days		Tue 7/1/14	Mon 8/25/14	Pearson
239	Scoring Procedures - CDE Review Final	5 days	238	Tue 8/26/14	Mon 9/1/14	CDE
240	Scoring Materials review rounds	50 days	239	Tue 9/2/14	Mon 11/10/14	Pearson
241	Scoring Materials - CDE Review Final	5 days	240	Tue 11/11/14	Mon 11/17/14	CDE
242	Scoring Monitors Recruitment	25 days		Fri 1/2/15	Thu 2/5/15	Pearson
243	Scoring Monitors Training	3 days	242	Fri 2/6/15	Tue 2/10/15	Pearson
244	**Online Score Submission System**	**77 days**		**Tue 7/1/14**	**Wed 10/15/14**	
245	Baseline System Requirements	30 days		Tue 7/1/14	Mon 8/11/14	Pearson
246	System developed, tested, reviewed with CDE	40 days	245	Tue 8/12/14	Mon 10/6/14	Pearson
247	Online Score Submission System - CDE Final Review	5 days	246	Tue 10/7/14	Mon 10/13/14	CDE
248	Create and Generate Teacher User ID's and Passwords	1 day	247	Tue 10/14/14	Tue 10/14/14	Pearson
249	Online Score Submission System - GO LIVE	0 days	48SS+2 days	Wed 10/15/14	Wed 10/15/14	Pearson
250	Scoring Guidance Document review rounds	60 days		Wed 4/1/15	Tue 6/23/15	Pearson
251	Scoring Guidance Document - CDE review	5 days	250	Wed 6/24/15	Tue 6/30/15	CDE
252	Scoring Guidance - Available to Classroom Teachers	0 days	251	Tue 6/30/15	Tue 6/30/15	Pearson
253	**Spring 2015**	**261 days**		**Tue 7/1/14**	**Tue 6/30/15**	
254	Scoring Procedures review rounds	40 days		Tue 7/1/14	Mon 8/25/14	Pearson
255	Scoring Procedures - CDE Review Final	5 days	254	Tue 8/26/14	Mon 9/1/14	CDE
256	Scoring Materials review rounds	50 days	255	Tue 9/2/14	Mon 11/10/14	Pearson
257	Scoring Materials - CDE Review Final	5 days	256	Tue 11/11/14	Mon 11/17/14	CDE
258	Scoring Monitors Recruitment	25 days		Fri 1/2/15	Thu 2/5/15	Pearson
259	Scoring Monitors Training	3 days	258	Fri 2/6/15	Tue 2/10/15	Pearson
260	**Online Score Submission System**	**152 days**		**Tue 7/1/14**	**Wed 1/28/15**	
261	Baseline System Requirements	80 days		Tue 7/1/14	Mon 10/20/14	Pearson
262	System developed, tested, reviewed with CDE	65 days	261	Tue 10/21/14	Mon 1/19/15	Pearson
263	Online Score Submission System - CDE Final Review	5 days	262	Tue 1/20/15	Mon 1/26/15	CDE
264	Create and Generate Teacher User ID's and Passwords	1 day	263	Tue 1/27/15	Tue 1/27/15	Pearson
265	Online Score Submission System - GO LIVE	0 days	64SS+2 days	Wed 1/28/15	Wed 1/28/15	Pearson
266	Scoring Guidance Document review rounds	60 days		Wed 4/1/15	Tue 6/23/15	Pearson
267	Scoring Guidance Document - CDE review	5 days	266	Wed 6/24/15	Tue 6/30/15	CDE
268	Scoring Guidance - Available to Classroom Teachers	0 days	267	Tue 6/30/15	Tue 6/30/15	Pearson
269	**Reporting of Data Files and Assessment Results**	**259 days**		**Tue 7/1/14**	**Fri 6/26/15**	
270	**Reporting Files - Specs**	**65 days**		**Tue 7/1/14**	**Mon 9/29/14**	
271	Reporting: Data File Layout review rounds	45 days		Tue 7/1/14	Mon 9/1/14	Pearson
272	Reporting: Score Report Shells review rounds	60 days		Tue 7/1/14	Mon 9/22/14	Pearson
273	Reporting: Individual Student Level File Layout - CDE Review Final	5 days	271	Tue 9/2/14	Mon 9/8/14	CDE
274	Reporting: Individual Student Level Report Shells – CDE Review Final	5 days	272	Tue 9/23/14	Mon 9/29/14	CDE
275	Reporting: State Level File Layouts – CDE Review Final	5 days	271	Tue 9/2/14	Mon 9/8/14	CDE
276	Reporting: District Level File Layouts – CDE Review Final	5 days	271	Tue 9/2/14	Mon 9/8/14	CDE
277	Reporting: District Level Report Shells – CDE Review Final	5 days	272	Tue 9/23/14	Mon 9/29/14	CDE
278	Reporting: School Level File Layouts – CDE Review Final	5 days	271	Tue 9/2/14	Mon 9/8/14	CDE
279	Reporting: School Level Report Shells – CDE Review Final	5 days	272	Tue 9/23/14	Mon 9/29/14	CDE
280	**Fall 2014**	**149 days**		**Tue 7/1/14**	**Fri 1/23/15**	
281	**Reports**	**47 days**		**Mon 11/17/14**	**Tue 1/20/15**	

EXHIBIT B

ID	Task Name	Duration	Predecessors	Start	Finish	Resource Names
282	Student Biographical Data Review Window	10 days	183	Mon 11/17/14	Fri 11/28/14	CO DISTRICTS
283	**Operational Reporting**	**16 days**		**Tue 12/30/14**	**Tue 1/20/15**	
284	Reporting: QC of Individual Student Level File – CDE Review	1 day	347	Tue 12/30/14	Tue 12/30/14	CDE
285	Reporting: QC of Individual Student Level File – CDE Verification	0 days	284	Tue 12/30/14	Tue 12/30/14	CDE
286	Reporting: Individual Student Level File Posted	0 days	285	Tue 12/30/14	Tue 12/30/14	Pearson
287	Reporting: Individual Student Report Bellwethers	2 days	85FS+3 days	Mon 1/5/15	Tue 1/6/15	CDE
288	Reporting: Individual Student Level File Electronic Reports Posted	0 days	87FS+3 days	Fri 1/9/15	Fri 1/9/15	Pearson
289	Reporting: Individual Student Level Hard Copy Reports in District	0 days	7FS+10 days	Tue 1/20/15	Tue 1/20/15	Pearson
290	**State Level Files**	**11 days**		**Tue 12/30/14**	**Tue 1/13/15**	
291	Pearson updates scoring system and produces/verifies State Level File	9 days	347	Tue 12/30/14	Fri 1/9/15	Pearson
292	Reporting: QC of State Level File(s) – CDE Review	2 days	291	Mon 1/12/15	Tue 1/13/15	CDE
293	Reporting: QC of State Level File(s) – CDE Verification	0 days	292	Tue 1/13/15	Tue 1/13/15	CDE
294	Reporting: State Level File(s) Posted	0 days	292	Tue 1/13/15	Tue 1/13/15	Pearson
295	**District Level Files**	**10 days**		**Mon 1/12/15**	**Fri 1/23/15**	
296	Reporting: QC of District Level File(s) – CDE Review	2 days	291	Mon 1/12/15	Tue 1/13/15	CDE
297	Reporting: QC of District Level File(s) – CDE Verification	0 days	296	Tue 1/13/15	Tue 1/13/15	CDE
298	Reporting: District Level File(s) Posted	0 days	297	Tue 1/13/15	Tue 1/13/15	Pearson
299	Reporting: District Reports Bellwethers	2 days	97FS+3 days	Mon 1/19/15	Tue 1/20/15	CDE
300	Reporting: District Electronic Reports Posted	0 days	99FS+3 days	Fri 1/23/15	Fri 1/23/15	Pearson
301	**School Level Files**	**10 days**		**Mon 1/12/15**	**Fri 1/23/15**	
302	Reporting: QC of School Level File(s) – CDE Review	2 days	291	Mon 1/12/15	Tue 1/13/15	CDE
303	Reporting: QC of School Level File(s) – CDE Verification	0 days	302	Tue 1/13/15	Tue 1/13/15	CDE
304	Reporting: School Level File(s) Posted	0 days	303	Tue 1/13/15	Tue 1/13/15	Pearson
305	Reporting: School Reports Bellwethers	2 days	04FS+3 days	Mon 1/19/15	Tue 1/20/15	CDE
306	Reporting: School Electronic Reports Posted	0 days	05FS+3 days	Fri 1/23/15	Fri 1/23/15	Pearson
307	**Interpretive Guide**	**60 days**		**Tue 7/1/14**	**Mon 9/22/14**	
308	Interpretive Guide review rounds	60 days		Tue 7/1/14	Mon 9/22/14	Pearson
309	Assessment Interpretive Guide – Review Final	5 days		Tue 7/1/14	Mon 7/7/14	CDE
310	Assessment Interpretive Guide Posted	0 days		Tue 7/1/14	Tue 7/1/14	Pearson
311	**Spring 2015**	**259 days**		**Tue 7/1/14**	**Fri 6/26/15**	
312	**Reports**	**35 days**		**Mon 5/11/15**	**Fri 6/26/15**	
313	Student Biographical Data Review Window	10 days	220	Mon 5/11/15	Fri 5/22/15	CO DISTRICTS
314	**Operational Reporting**	**16 days**		**Fri 6/5/15**	**Fri 6/26/15**	
315	Reporting: QC of Individual Student Level File – CDE Review	1 day	13FS+9 days	Fri 6/5/15	Fri 6/5/15	CDE
316	Reporting: QC of Individual Student Level File – CDE Verification	0 days	315	Fri 6/5/15	Fri 6/5/15	CDE
317	Reporting: Individual Student Level File Posted	0 days	316	Fri 6/5/15	Fri 6/5/15	Pearson
318	Reporting: Individual Student Report Bellwethers	2 days	16FS+3 days	Thu 6/11/15	Fri 6/12/15	CDE
319	Reporting: Individual Student Level File Electronic Reports Posted	0 days	18FS+3 days	Wed 6/17/15	Wed 6/17/15	Pearson
320	Reporting: Individual Student Level Hard Copy Reports in District	0 days	8FS+10 days	Fri 6/26/15	Fri 6/26/15	Pearson
321	**State Level Files**	**7 days**		**Wed 5/27/15**	**Thu 6/4/15**	
322	Pearson updates scoring system and produces/verifies State Level File	5 days	352	Wed 5/27/15	Tue 6/2/15	Pearson
323	Reporting: QC of State Level File(s) – CDE Review	2 days	322	Wed 6/3/15	Thu 6/4/15	CDE
324	Reporting: QC of State Level File(s) – CDE Verification	0 days	323	Thu 6/4/15	Thu 6/4/15	CDE
325	Reporting: State Level File(s) Posted	0 days	323	Thu 6/4/15	Thu 6/4/15	Pearson
326	**District Level Files**	**10 days**		**Wed 6/3/15**	**Tue 6/16/15**	
327	Reporting: QC of District Level File(s) – CDE Review	2 days	322	Wed 6/3/15	Thu 6/4/15	CDE
328	Reporting: QC of District Level File(s) – CDE Verification	0 days	327	Thu 6/4/15	Thu 6/4/15	CDE

				Colorado Alternate Schedule - FY2015		
ID	Task Name	Duration	Predecessors	Start	Finish	Resource Names
329	Reporting: District Level File(s) Posted	0 days	328	Thu 6/4/15	Thu 6/4/15	Pearson
330	Reporting: District Reports Bellwethers	2 days	28FS+3 days	Wed 6/10/15	Thu 6/11/15	CDE
331	Reporting: District Electronic Reports Posted	0 days	30FS+3 days	Tue 6/16/15	Tue 6/16/15	Pearson
332	**School Level Files**	**10 days**		**Wed 6/3/15**	**Tue 6/16/15**	
333	Reporting: QC of School Level File(s) – CDE Review	2 days	322	Wed 6/3/15	Thu 6/4/15	CDE
334	Reporting: QC of School Level File(s) – CDE Verification	0 days	333	Thu 6/4/15	Thu 6/4/15	CDE
335	Reporting: School Level File(s) Posted	0 days	334	Thu 6/4/15	Thu 6/4/15	Pearson
336	Reporting: School Reports Bellwethers	2 days	35FS+3 days	Wed 6/10/15	Thu 6/11/15	CDE
337	Reporting: School Electronic Reports Posted	0 days	36FS+3 days	Tue 6/16/15	Tue 6/16/15	Pearson
338	**Interpretive Guide**	**60 days**		**Tue 7/1/14**	**Mon 9/22/14**	
339	Interpretive Guide review rounds	60 days		Tue 7/1/14	Mon 9/22/14	Pearson
340	Assessment Interpretive Guide – Review Final	5 days		Tue 7/1/14	Mon 7/7/14	CDE
341	Assessment Interpretive Guide Posted	0 days		Tue 7/1/14	Tue 7/1/14	Pearson
342	**Psychometric, Research, and Technical Activities**	**293 days**		**Tue 7/1/14**	**Fri 8/14/15**	
343	**Fall HS Field Test and Operational Analysis**	**145 days**		**Tue 7/1/14**	**Mon 1/19/15**	
344	Field Test- Sampling Design	60 days		Tue 7/1/14	Mon 9/22/14	Pearson
345	Psychometric Analysis of Field Test	30 days	82FS+6 days	Tue 12/9/14	Mon 1/19/15	Pearson
346	Operational Analysis	11 days	82FS+9 days	Fri 12/12/14	Fri 12/26/14	Pearson
347	CDE Review and Approval of Equating Results	1 day	346	Mon 12/29/14	Mon 12/29/14	CDE
348	**Spring ES/MS Field Test and Operational Analysis**	**274 days**		**Tue 7/1/14**	**Fri 7/17/15**	
349	Field Test- Sampling Design	60 days		Tue 7/1/14	Mon 9/22/14	Pearson
350	Psychometric Analysis of Field Test	30 days	316	Mon 6/8/15	Fri 7/17/15	Pearson
351	Operational Analysis	11 days	220	Mon 5/11/15	Mon 5/25/15	Pearson
352	CDE Review and Approval of Equating Results	1 day	351	Tue 5/26/15	Tue 5/26/15	CDE
353	Equating	112 days		Tue 7/1/14	Wed 12/3/14	
354	Linking and Equating Presentation to TAC 2	2 days		Tue 12/2/14	Wed 12/3/14	Pearson
355	Alignment Studies -- ONLY ONE TIME IN THE CONTRACT	20 days		Tue 7/1/14	Mon 7/28/14	Pearson
356	Vertical Scale Presentation to TAC 1 -- DOESN'T SEEM ILIKE VERT SCALE WOULD APPLY -- FROM SOW?	2 days		Tue 9/2/14	Wed 9/3/14	Pearson
357	**TAC Meetings**	**112 days**		**Tue 9/2/14**	**Wed 2/4/15**	
358	TAC Meeting 1	2 days		Tue 9/2/14	Wed 9/3/14	Pearson
359	TAC Meeting 2	2 days		Tue 12/2/14	Wed 12/3/14	Pearson
360	TAC Meeting 3	2 days		Tue 2/3/15	Wed 2/4/15	Pearson
361	**Technical Reports**	**132 days**		**Wed 2/11/15**	**Fri 8/14/15**	
362	Technical Report – Final version to CDE	0 days		Fri 8/14/15	Fri 8/14/15	Pearson
363	Irregularity and Data Forensic Report	10 days	243	Wed 2/11/15	Tue 2/24/15	Pearson
364	**Training and Support**	**179 days**		**Tue 7/1/14**	**Fri 3/6/15**	
365	Understanding Assessment Results Training Materials review rounds	20 days		Tue 7/1/14	Mon 7/28/14	Pearson
366	Understanding Assessment Results Training Material - CDE Final Review	5 days	365	Tue 7/29/14	Mon 8/4/14	CDE
367	Understanding Assessment Results Training	5 days		Mon 8/25/14	Fri 8/29/14	Pearson
368	Alternate Assessment Administration Training Material review rounds	30 days		Fri 1/2/15	Thu 2/12/15	Pearson
369	Alternate Assessment Administration Training Material CDE Review Final	5 days	368	Fri 2/13/15	Thu 2/19/15	CDE
370	Conduct Alternate Assessment Administration Training	5 days		Mon 3/2/15	Fri 3/6/15	Pearson
371	Online Training Support Materials	0 days		Mon 2/2/15	Mon 2/2/15	Pearson
372	**Customer Service**	**260 days?**		**Tue 7/1/14**	**Tue 6/30/15**	
373	Customer feedback survey	0 days		Tue 6/30/15	Tue 6/30/15	Pearson
374	Establish DAC Website	20 days		Tue 7/1/14	Mon 7/28/14	Pearson
375		1 day?		Tue 7/1/14	Tue 7/1/14	

EXHIBIT B

					Colorado Alternate Schedule - FY2016	
ID	Task Name	Duration	Start	Finish	Resource Names	
0	**CO Alternate Assessment - FY2016**	**588 days?**	**Mon 6/1/15**	**Thu 8/31/17**		
1	**START**	**588 days?**	**Mon 6/1/15**	**Thu 8/31/17**		
2	**General**	**5 days**	**Wed 7/1/15**	**Tue 7/7/15**		
3	Security Plan updated and rebaselined	5 days	Wed 7/1/15	Tue 7/7/15	Pearson	
4	**Program Management**	**305 days**	**Wed 7/1/15**	**Wed 8/31/16**		
5	**Project Schedule**	**9 days**	**Wed 7/1/15**	**Mon 7/13/15**		
6	Draft Project Schedule Created	4 days	Wed 7/1/15	Mon 7/6/15	Pearson	
7	Project Schedule - CDE Review	3 days	Tue 7/7/15	Thu 7/9/15	CDE	
8	Project Schedule - CDE and Pearson Joint Review	1 day	Fri 7/10/15	Fri 7/10/15	Pearson/CDE	
9	Project Schedule Updated and Baselined	1 day	Mon 7/13/15	Mon 7/13/15	Pearson	
10	**Project Meetings**	**231 days**	**Wed 7/1/15**	**Wed 5/18/16**		
11	**Project Meeting 1**	**16 days**	**Wed 7/1/15**	**Wed 7/22/15**		
12	Agenda Drafted and Delivered to CDE	2 days	Wed 7/1/15	Thu 7/2/15	Pearson	
13	Meeting held (Denver, CO)	2 days	Tue 7/14/15	Wed 7/15/15		
14	Meeting Minutes Distributed	5 days	Thu 7/16/15	Wed 7/22/15	Pearson	
15	**Project Meeting 2**	**12 days**	**Tue 9/1/15**	**Wed 9/16/15**		
16	Agenda Drafted and Delivered to CDE	2 days	Tue 9/1/15	Wed 9/2/15	Pearson	
17	Meeting held (Denver, CO)	2 days	Tue 9/8/15	Wed 9/9/15		
18	Meeting Minutes Distributed	5 days	Thu 9/10/15	Wed 9/16/15	Pearson	
19	**Project Meeting 3 - In person**	**13 days**	**Mon 11/2/15**	**Wed 11/18/15**		
20	Agenda Drafted and Delivered to CDE	2 days	Mon 11/2/15	Tue 11/3/15	Pearson	
21	Meeting held (San Antonio, TX)	2 days	Tue 11/10/15	Wed 11/11/15		
22	Meeting Minutes Distributed	5 days	Thu 11/12/15	Wed 11/18/15	Pearson	
23	**Project Meeting 4**	**13 days**	**Mon 1/4/16**	**Wed 1/20/16**		
24	Agenda Drafted and Delivered to CDE	2 days	Mon 1/4/16	Tue 1/5/16	Pearson	
25	Meeting held (Denver, CO)	2 days	Tue 1/12/16	Wed 1/13/16		
26	Meeting Minutes Distributed	5 days	Thu 1/14/16	Wed 1/20/16	Pearson	
27	**Project Meeting 5**	**12 days**	**Tue 3/1/16**	**Wed 3/16/16**		
28	Agenda Drafted and Delivered to CDE	2 days	Tue 3/1/16	Wed 3/2/16	Pearson	
29	Meeting held (Denver, CO)	2 days	Tue 3/8/16	Wed 3/9/16		
30	Meeting Minutes Distributed	5 days	Thu 3/10/16	Wed 3/16/16	Pearson	
31	**Project Meeting 6 - In person**	**13 days**	**Mon 5/2/16**	**Wed 5/18/16**		
32	Agenda Drafted and Delivered to CDE	2 days	Mon 5/2/16	Tue 5/3/16	Pearson	
33	Meeting held (San Antonio, TX)	2 days	Tue 5/10/16	Wed 5/11/16		
34	Meeting Minutes Distributed	5 days	Thu 5/12/16	Wed 5/18/16	Pearson	
35	**Monthy Reports**	**240 days**	**Wed 8/5/15**	**Wed 7/6/16**		
36	Jul	0 days	Wed 8/5/15	Wed 8/5/15	Pearson	
37	Aug	0 days	Thu 9/3/15	Thu 9/3/15	Pearson	
38	Sep	0 days	Mon 10/5/15	Mon 10/5/15	Pearson	
39	Oct	0 days	Thu 11/5/15	Thu 11/5/15	Pearson	
40	Nov	0 days	Thu 12/3/15	Thu 12/3/15	Pearson	
41	Dec	0 days	Wed 1/6/16	Wed 1/6/16	Pearson	
42	Jan	0 days	Thu 2/4/16	Thu 2/4/16	Pearson	
43	Feb	0 days	Fri 3/4/16	Fri 3/4/16	Pearson	
44	Mar	0 days	Mon 4/4/16	Mon 4/4/16	Pearson	
45	Apr	0 days	Thu 5/5/16	Thu 5/5/16	Pearson	
46	May	0 days	Fri 6/3/16	Fri 6/3/16	Pearson	

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
47	Jun	0 days	Wed 7/6/16	Wed 7/6/16	Pearson
48	**DAC**	**107 days**	**Wed 10/21/15**	**Thu 3/17/16**	
49	DAC Academy	2 days	Thu 2/18/16	Fri 2/19/16	Pearson
50	DAC Management 1	2 days	Wed 10/21/15	Thu 10/22/15	Pearson
51	DAC Management 2	2 days	Wed 3/16/16	Thu 3/17/16	Pearson
52	**Program Improvement**	**222 days**	**Wed 7/22/15**	**Thu 5/26/16**	
53	Program Improvement Plan - Development	15 days	Thu 12/31/15	Wed 1/20/16	Pearson
54	Program Improvement Plan - Production	15 days	Wed 7/22/15	Tue 8/11/15	Pearson
55	Program Improvement Plan - Shipping and Receipt	15 days	Fri 10/9/15	Thu 10/29/15	Pearson
56	Program Improvement Plan - Administration	15 days	Mon 11/16/15	Fri 12/4/15	Pearson
57	Program Improvement Plan - Scanning	15 days	Wed 11/11/15	Tue 12/1/15	Pearson
58	Program Improvement Plan - Scoring	15 days	Wed 9/30/15	Tue 10/20/15	Pearson
59	Program Improvement Plan - Data Processing	15 days	Fri 5/6/16	Thu 5/26/16	Pearson
60	Program Improvement Plan - Reporting and Psychometrics	15 days	Wed 1/27/16	Tue 2/16/16	Pearson
61	Program Improvement Plan - Meetings	15 days	Mon 10/5/15	Fri 10/23/15	Pearson
62	**Invoices**	**240 days**	**Wed 9/30/15**	**Wed 8/31/16**	
63	Invoice Q1	0 days	Wed 9/30/15	Wed 9/30/15	Pearson
64	Invoice Q2	0 days	Thu 12/31/15	Thu 12/31/15	Pearson
65	Invoice Q3	0 days	Thu 3/31/16	Thu 3/31/16	Pearson
66	Invoice Q4	0 days	Wed 6/15/16	Wed 6/15/16	Pearson
67	Invoice - "tail"	0 days	Wed 8/31/16	Wed 8/31/16	Pearson
68	**Assessment Development**	**303 days**	**Mon 6/1/15**	**Wed 7/27/16**	
69	**Style Guide**	**30 days**	**Wed 7/1/15**	**Tue 8/11/15**	
70	Colorado Style Guide - Updates	30 days	Wed 7/1/15	Tue 8/11/15	Pearson
71	Colorado Style Guide - Final for year	0 days	Tue 8/11/15	Tue 8/11/15	Pearson
72	**Item Development (Spring 2017 Field Test)**	**127 days**	**Tue 2/2/16**	**Wed 7/27/16**	
73	Item Writer Recruiting	25 days	Tue 2/2/16	Mon 3/7/16	Pearson
74	Develop Training Materials and Item Development Plans	5 days	Thu 2/25/16	Wed 3/2/16	Pearson
75	Item Development Meeting 1 Materials – CDE Review	5 days	Fri 3/4/16	Thu 3/10/16	CDE
76	Edit and ship materials after CDE review	7 days	Fri 3/11/16	Mon 3/21/16	Pearson
77	Item Development Meeting 1	2 days	Tue 3/22/16	Wed 3/23/16	Pearson
78	Provide developers feedback	39 days	Mon 3/28/16	Thu 5/19/16	Pearson
79	Develop training materials and item development plans (meeting 2)	5 days	Mon 5/16/16	Fri 5/20/16	Pearson
80	Item Writer Recruiting	25 days	Mon 5/2/16	Fri 6/3/16	Pearson
81	Item Development Meeting 2 Materials – CDE Review	3 days	Mon 5/30/16	Wed 6/1/16	CDE
82	Edit and ship materials after CDE review	8 days	Thu 6/2/16	Mon 6/13/16	Pearson
83	Item Development Meeting 2	2 days	Tue 6/14/16	Wed 6/15/16	Pearson
84	Provide developers feedback	10 days	Thu 6/16/16	Wed 6/29/16	Pearson
85	Conduct internal Content and Editorial Reviews	20 days	Thu 6/30/16	Wed 7/27/16	Pearson
86	**Content Review Sc and SS PLD Meeting - SS (Spring 2016 Field Test)**	**68 days**	**Wed 7/1/15**	**Fri 10/2/15**	
87	Item Review – CDE Review (newly written items)	5 days	Mon 7/27/15	Fri 7/31/15	CDE
88	Recruit Content Review Participants	10 days	Wed 7/1/15	Tue 7/14/15	CDE
89	Create training materials for Content and PLD Meetings	9 days	Fri 7/10/15	Wed 7/22/15	Pearson
90	Content and PLD Meeting training Materials – CDE Review	5 days	Thu 7/23/15	Wed 7/29/15	Pearson
91	Edit and ship materials after CDE review	13 days	Thu 7/30/15	Mon 8/17/15	CDE
92	Content and PLD Meeting	2 days	Tue 8/18/15	Wed 8/19/15	Pearson
93	Iimplement edits suggested by committee	30 days	Fri 8/21/15	Thu 10/1/15	Pearson

				Colorado Alternate Schedule - FY2016		
ID	Task Name	Duration	Start	Finish	Resource Names	
94	Send final results of Content and Bias Sensitivity Review meeting	1 day	Fri 10/2/15	Fri 10/2/15	Pearson	
95	**Bias and Sensitivity Review**	**68 days**	**Wed 7/1/15**	**Fri 10/2/15**		
96	Recruit Content Review Participants	10 days	Wed 7/1/15	Tue 7/14/15	Pearson	
97	Create training materials for Bias and sensitivity Reviews	10 days	Fri 7/10/15	Thu 7/23/15	Pearson	
98	Bias and Sensitivity Review training materials – CDE Review	5 days	Fri 7/24/15	Thu 7/30/15	CDE	
99	Edit and ship materials after CDE review	13 days	Fri 7/31/15	Tue 8/18/15	Pearson	
100	Bias and Sensitivity Review Meeting	1 day	Thu 8/20/15	Thu 8/20/15	Pearson	
101	Implement edits suggested by committee	30 days	Mon 8/24/15	Fri 10/2/15	Pearson	
102	Send final results of Content and Bias Sensitivity Review meeting	1 day	Thu 8/27/15	Thu 8/27/15	Pearson	
103	**Data Review**	**162 days**	**Mon 6/1/15**	**Tue 1/12/16**		
104	**Elementary/Middle**	**53 days**	**Mon 6/1/15**	**Wed 8/12/15**		
105	Recruit Data Review Participants	25 days	Mon 6/1/15	Fri 7/3/15	Pearson	
106	Content Creattes Data Review Training Materials	5 days	Wed 7/1/15	Tue 7/7/15	Pearson	
107	Produce Data Review Training Materials – CDE Review	4 days	Wed 7/8/15	Mon 7/13/15	CDE	
108	Edit and ship materials after CDE review	10 days	Tue 7/14/15	Mon 7/27/15	Pearson	
109	Conduct Data Review meeting	1 day	Tue 7/28/15	Tue 7/28/15	Pearson	
110	Implement edits suggested by committee	10 days	Wed 7/29/15	Tue 8/11/15	Pearson	
111	Provide final results of Data Review Meetings	1 day	Wed 8/12/15	Wed 8/12/15	Pearson	
112	**High School**	**31 days**	**Tue 12/1/15**	**Tue 1/12/16**		
113	Recruit Data Review Participants	25 days	Tue 12/1/15	Mon 1/4/16	Pearson	
114	Content Creates Data Review Training Materials	5 days	Tue 12/1/15	Mon 12/7/15	Pearson	
115	Produce Data Review Training Materials – CDE Review	4 days	Tue 12/8/15	Fri 12/11/15	CDE	
116	Edit and ship materials after CDE review	10 days	Mon 12/14/15	Fri 12/25/15	Pearson	
117	Conduct Data Review meeting	1 day	Mon 12/28/15	Mon 12/28/15	Pearson	
118	Implement edits suggested by committee	10 days	Tue 12/29/15	Mon 1/11/16	Pearson	
119	Provide final results of Data Review Meetings	1 day	Tue 1/12/16	Tue 1/12/16	Pearson	
120	**Form Development**	**225 days**	**Wed 7/1/15**	**Tue 5/10/16**		
121	**Spring 2016 - Elem and Middle**	**141 days**	**Wed 7/1/15**	**Wed 1/13/16**		
122	**Core Test Form Development (Science and Social Studies)**	**35 days**	**Thu 8/13/15**	**Wed 9/30/15**		
123	Construct forms	20 days	Thu 8/13/15	Wed 9/9/15	Pearson	
124	CDE reviews forms	5 days	Thu 9/10/15	Wed 9/16/15	CDE	
125	Revise forms based on CDE review	5 days	Thu 9/17/15	Wed 9/23/15	Pearson	
126	Core Test Form Development – CDE Review Final	5 days	Thu 9/24/15	Wed 9/30/15	CDE	
127	Core Test Form Development – Final	0 days	Wed 9/30/15	Wed 9/30/15	Pearson	
128	**Embedded Field Test Form Development**	**65 days**	**Thu 10/1/15**	**Wed 12/30/15**		
129	Construct forms	50 days	Thu 10/1/15	Wed 12/9/15	Pearson	
130	CDE reviews forms	5 days	Thu 12/10/15	Wed 12/16/15	Pearson	
131	Revise forms based on CDE review	5 days	Thu 12/17/15	Wed 12/23/15	CDE	
132	Embedded Field Test Form Development – Final	5 days	Thu 12/24/15	Wed 12/30/15	Pearson	
133	Send Production ready files to Pearson (Files to Print)	0 days	Wed 12/30/15	Wed 12/30/15	Pearson	
134	**Certification for District Translators**	**65 days**	**Wed 7/1/15**	**Tue 9/29/15**		
135	Procedures documente produced	60 days	Wed 7/1/15	Tue 9/22/15	Pearson	
136	Procedures for Certification for District Translators – CDE Review Final	5 days	Wed 9/23/15	Tue 9/29/15	CDE	
137	**Test/Ancillary Material - Development - Spring and Fall 2016**	**141 days**	**Wed 7/1/15**	**Wed 1/13/16**		
138	District and School Assessment Coordinator manual review rounds	60 days	Wed 7/1/15	Tue 9/22/15	Pearson	
139	Document Development: District and School Assessment Coordinators Manual – CDE Review Final	5 days	Wed 9/23/15	Tue 9/29/15	CDE	
140	Examiners Manual review rounds	30 days	Mon 10/12/15	Fri 11/20/15	Pearson	

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
141	Document Development: Examiners Manual – CDE Review Final	5 days	Mon 11/23/15	Fri 11/27/15	CDE
142	Certification Forms review rounds	60 days	Wed 7/1/15	Tue 9/22/15	Pearson
143	Document Development: Certification Forms – CDE Review Final	5 days	Wed 9/23/15	Tue 9/29/15	CDE
144	Document Development: Test Booklets – CDE Review Final	5 days	Thu 1/7/16	Wed 1/13/16	CDE
145	Ancillary Materials (Manipulatives) review rounds	60 days	Wed 7/1/15	Tue 9/22/15	Pearson
146	Document Development: Ancillary Materials – CDE Review Final	5 days	Wed 9/23/15	Tue 9/29/15	CDE
147	**Fall 2016 - High School**	**225 days**	**Wed 7/1/15**	**Tue 5/10/16**	
148	**Core Test Form Development (Science and Social Studies)**	**35 days**	**Wed 1/13/16**	**Tue 3/1/16**	
149	Construct forms	20 days	Wed 1/13/16	Tue 2/9/16	Pearson
150	CDE reviews forms	5 days	Wed 2/10/16	Tue 2/16/16	CDE
151	Revise forms based on CDE review	5 days	Wed 2/17/16	Tue 2/23/16	Pearson
152	Core Test Form Development – CDE Review Final	5 days	Wed 2/24/16	Tue 3/1/16	CDE
153	Core Test Form Development – Final	0 days	Tue 3/1/16	Tue 3/1/16	Pearson
154	**Embedded Field Test Form Development**	**50 days**	**Wed 3/2/16**	**Tue 5/10/16**	
155	Construct forms	35 days	Wed 3/2/16	Tue 4/19/16	Pearson
156	CDE reviews forms	5 days	Wed 4/20/16	Tue 4/26/16	Pearson
157	Revise forms based on CDE review	5 days	Wed 4/27/16	Tue 5/3/16	CDE
158	Embedded Field Test Form Development – Final	5 days	Wed 5/4/16	Tue 5/10/16	Pearson
159	Send Production ready files to Pearson (Files to Print)	0 days	Tue 5/10/16	Tue 5/10/16	Pearson
160	**Certification for District Translators**	**65 days**	**Wed 7/1/15**	**Tue 9/29/15**	
161	Procedures documente produced	60 days	Wed 7/1/15	Tue 9/22/15	Pearson
162	Procedures for Certification for District Translators – CDE Review Final	5 days	Wed 9/23/15	Tue 9/29/15	CDE
163	**Assessment Administration**	**566 days**	**Wed 7/1/15**	**Thu 8/31/17**	
164	**Fall 2015 - HS**	**566 days**	**Wed 7/1/15**	**Thu 8/31/17**	
165	**Orders for Materials**	**35 days**	**Tue 9/1/15**	**Mon 10/19/15**	
166	Pre-ID File Transfer	0 days	Tue 9/1/15	Tue 9/1/15	CDE
167	Materials Ordering System Operational	0 days	Tue 9/1/15	Tue 9/1/15	Pearson
168	Materials Ordering Window	15 days	Tue 9/1/15	Mon 9/21/15	Pearson
169	Online Rosters Generated	5 days	Tue 9/22/15	Mon 9/28/15	Pearson
170	Additional Materials Ordering Window	20 days	Tue 9/22/15	Mon 10/19/15	Pearson
171	**Test/Ancillary Material - Production**	**15 days**	**Wed 7/1/15**	**Tue 7/21/15**	
172	Proctors Manual Produced	15 days	Wed 7/1/15	Tue 7/21/15	Pearson
173	Test Booklets Produced	15 days	Wed 7/1/15	Tue 7/21/15	CDE
174	Ancillaries Produced	15 days	Wed 7/1/15	Tue 7/21/15	Pearson
175	**Packaging and Delivery**	**72 days**	**Wed 7/1/15**	**Thu 10/8/15**	
176	Colorado Districts in Shipping System	0 days	Wed 7/1/15	Wed 7/1/15	Pearson
177	Packaging Specifications Finalized	0 days	Wed 7/1/15	Wed 7/1/15	Pearson
178	Non-secure Materials Packaged	10 days	Tue 9/22/15	Mon 10/5/15	Pearson
179	Non-secure Materials Shipped	3 days	Tue 10/6/15	Thu 10/8/15	Pearson
180	Non-secure Materials in District	0 days	Thu 10/8/15	Thu 10/8/15	Pearson
181	Secure Materials Packaged	10 days	Tue 9/22/15	Mon 10/5/15	Pearson
182	Secure Materials Shipped	3 days	Tue 10/6/15	Thu 10/8/15	Pearson
183	Secure Materials in District	0 days	Thu 10/8/15	Thu 10/8/15	Pearson
184	**Test Administration**	**15 days**	**Mon 10/26/15**	**Fri 11/13/15**	
185	Operational Test Administration Window - Science and Social Studies	15 days	Mon 10/26/15	Fri 11/13/15	
186	Online Score Submission Window	15 days	Mon 10/26/15	Fri 11/13/15	
187	**Material Return and Verification**	**466 days**	**Tue 11/17/15**	**Thu 8/31/17**	

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
					Colorado Alternate Schedule - FY2016
188	To Be Scored Materials Return Shipment	0 days	Tue 11/17/15	Tue 11/17/15	Pearson
189	Not To Be Scored Materials Return Shipment	0 days	Tue 11/17/15	Tue 11/17/15	Pearson
190	Non-scored Materials Destruction	0 days	Thu 3/2/17	Thu 3/2/17	Pearson
191	Scored Materials Destruction	0 days	Thu 8/31/17	Thu 8/31/17	Pearson
192	Secure Materials Verification – Initial Report	0 days	Tue 12/1/15	Tue 12/1/15	Pearson
193	Secure Materials Verification – Weekly Report	0 days	Tue 12/8/15	Tue 12/8/15	Pearson
194	Secure Materials Verification – Final Report	0 days	Tue 12/15/15	Tue 12/15/15	Pearson
195	**Test Monitoring**	**163 days**	**Wed 7/1/15**	**Sat 2/13/16**	
196	Test Monitoring Protocol review rounds	60 days	Wed 7/1/15	Tue 9/22/15	Pearson
197	Test Monitoring Protocol – CDE Review Final	5 days	Wed 9/23/15	Tue 9/29/15	CDE
198	Test Monitoring Sites Selected	0 days	Fri 1/15/16	Fri 1/15/16	Pearson
199	Test Monitoring Sites Notified – TBD if needed	0 days	Sat 2/13/16	Sat 2/13/16	Pearson
200	Test Monitoring	20 days	Mon 10/26/15	Fri 11/20/15	Pearson
201	**Spring 2016 - Elem/Middle**	**566 days**	**Wed 7/1/15**	**Thu 8/31/17**	
202	**Orders for Materials**	**60 days**	**Tue 2/2/16**	**Mon 4/25/16**	
203	Pre-ID File Transfer	0 days	Tue 2/2/16	Tue 2/2/16	CDE
204	Materials Ordering System Operational	0 days	Tue 2/2/16	Tue 2/2/16	Pearson
205	Materials Ordering Window	20 days	Tue 2/2/16	Mon 2/29/16	Pearson
206	Online Rosters Generated	5 days	Tue 3/1/16	Mon 3/7/16	Pearson
207	Additional Materials Ordering Window	35 days	Tue 3/8/16	Mon 4/25/16	Pearson
208	**Test/Ancillary Material - Production**	**106 days**	**Wed 9/30/15**	**Wed 2/24/16**	
209	Proctors Manual Produced	15 days	Thu 2/4/16	Wed 2/24/16	Pearson
210	Test Booklets Produced	15 days	Thu 12/31/15	Wed 1/20/16	CDE
211	Ancillaries Produced	15 days	Wed 9/30/15	Tue 10/20/15	Pearson
212	**Packaging and Delivery**	**59 days**	**Sat 1/2/16**	**Thu 3/24/16**	
213	Colorado Districts in Shipping System	0 days	Tue 2/2/16	Tue 2/2/16	Pearson
214	Packaging Specifications Finalized	0 days	Sat 1/2/16	Sat 1/2/16	Pearson
215	Non-secure Materials Packaged	10 days	Tue 3/8/16	Mon 3/21/16	Pearson
216	Non-secure Materials Shipped	3 days	Tue 3/22/16	Thu 3/24/16	Pearson
217	Non-secure Materials in District	0 days	Thu 3/24/16	Thu 3/24/16	Pearson
218	Secure Materials Packaged	10 days	Tue 3/8/16	Mon 3/21/16	Pearson
219	Secure Materials Shipped	3 days	Tue 3/22/16	Thu 3/24/16	Pearson
220	Secure Materials in District	0 days	Thu 3/24/16	Thu 3/24/16	Pearson
221	**Test Administration**	**15 days**	**Mon 4/11/16**	**Fri 4/29/16**	
222	Operational Test Administration Window - Science and Social Studies	15 days	Mon 4/11/16	Fri 4/29/16	
223	Online Score Submission Window	15 days	Mon 4/11/16	Fri 4/29/16	
224	**Material Return and Verification**	**346 days**	**Tue 5/3/16**	**Thu 8/31/17**	
225	To Be Scored Materials Return Shipment	0 days	Tue 5/3/16	Tue 5/3/16	Pearson
226	Not To Be Scored Materials Return Shipment	0 days	Tue 5/3/16	Tue 5/3/16	Pearson
227	Non-scored Materials Destruction	0 days	Thu 3/2/17	Thu 3/2/17	Pearson
228	Scored Materials Destruction	0 days	Thu 8/31/17	Thu 8/31/17	Pearson
229	Secure Materials Verification – Initial Report	0 days	Tue 5/17/16	Tue 5/17/16	Pearson
230	Secure Materials Verification – Weekly Report	0 days	Tue 5/24/16	Tue 5/24/16	Pearson
231	Secure Materials Verification – Final Report	0 days	Tue 5/31/16	Tue 5/31/16	Pearson
232	**Test Monitoring**	**223 days**	**Wed 7/1/15**	**Fri 5/6/16**	
233	Test Monitoring Protocol review rounds	60 days	Wed 7/1/15	Tue 9/22/15	Pearson
234	Test Monitoring Protocol – CDE Review Final	5 days	Wed 9/23/15	Tue 9/29/15	CDE

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
235	Test Monitoring Sites Selected	0 days	Fri 1/15/16	Fri 1/15/16	Pearson
236	Test Monitoring Sites Notified – TBD if needed	0 days	Sat 2/13/16	Sat 2/13/16	Pearson
237	Test Monitoring	20 days	Mon 4/11/16	Fri 5/6/16	Pearson
238	**Scoring**	**262 days**	**Wed 7/1/15**	**Thu 6/30/16**	
239	**Fall 2015**	**222 days**	**Wed 7/1/15**	**Thu 5/5/16**	
240	**Scoring Processes**	**222 days**	**Wed 7/1/15**	**Thu 5/5/16**	
241	Scoring Procedures review rounds	40 days	Wed 7/1/15	Tue 8/25/15	Pearson
242	Scoring Procedures - CDE Review Final	5 days	Wed 8/26/15	Tue 9/1/15	CDE
243	Scoring Materials review rounds	50 days	Wed 9/2/15	Tue 11/10/15	Pearson
244	Scoring Materials - CDE Review Final	5 days	Fri 4/29/16	Thu 5/5/16	CDE
245	Scoring Monitors Recruitment	25 days	Wed 7/1/15	Tue 8/4/15	Pearson
246	Scoring Monitors Training	3 days	Wed 8/5/15	Fri 8/7/15	Pearson
247	**Online Score Submission System**	**67 days**	**Wed 7/1/15**	**Thu 10/1/15**	
248	Baseline System Requirements	10 days	Wed 7/1/15	Tue 7/14/15	Pearson
249	System developed, tested, reviewed with CDE	50 days	Wed 7/15/15	Tue 9/22/15	Pearson
250	Online Score Submission System - CDE Final Review	5 days	Wed 9/23/15	Tue 9/29/15	CDE
251	Create and Generate Teacher User ID's and Passwords	1 day	Wed 9/30/15	Wed 9/30/15	Pearson
252	Online Score Submission System - GO LIVE	0 days	Thu 10/1/15	Thu 10/1/15	Pearson
253	Scoring Guidance Document review rounds	60 days	Wed 7/1/15	Tue 9/22/15	Pearson
254	Scoring Guidance Document - CDE review	5 days	Wed 9/23/15	Tue 9/29/15	CDE
255	Scoring Guidance - Available to Classroom Teachers	0 days	Tue 9/29/15	Tue 9/29/15	Pearson
256	**Spring 2015**	**262 days**	**Wed 7/1/15**	**Thu 6/30/16**	
257	**Scoring Processes**	**262 days**	**Wed 7/1/15**	**Thu 6/30/16**	
258	Scoring Procedures review rounds	40 days	Wed 7/1/15	Tue 8/25/15	Pearson
259	Scoring Procedures - CDE Review Final	5 days	Wed 8/26/15	Tue 9/1/15	CDE
260	Scoring Materials review rounds	50 days	Wed 9/2/15	Tue 11/10/15	Pearson
261	Scoring Materials - CDE Review Final	5 days	Fri 4/29/16	Thu 5/5/16	CDE
262	Scoring Monitors Recruitment	25 days	Wed 7/1/15	Tue 8/4/15	Pearson
263	Scoring Monitors Training	3 days	Mon 11/23/15	Wed 11/25/15	Pearson
264	**Online Score Submission System**	**152 days**	**Wed 7/1/15**	**Thu 1/28/16**	
265	Baseline System Requirements	80 days	Wed 7/1/15	Tue 10/20/15	Pearson
266	System developed, tested, reviewed with CDE	65 days	Wed 10/21/15	Tue 1/19/16	Pearson
267	Online Score Submission System - CDE Final Review	5 days	Wed 1/20/16	Tue 1/26/16	CDE
268	Create and Generate Teacher User ID's and Passwords	1 day	Wed 1/27/16	Wed 1/27/16	Pearson
269	Online Score Submission System - GO LIVE	0 days	Thu 1/28/16	Thu 1/28/16	Pearson
270	Scoring Guidance Document review rounds	60 days	Fri 4/1/16	Thu 6/23/16	Pearson
271	Scoring Guidance Document - CDE review	5 days	Fri 6/24/16	Thu 6/30/16	CDE
272	Scoring Guidance - Available to Classroom Teachers	0 days	Thu 6/30/16	Thu 6/30/16	Pearson
273	**Reporting of Data Files and Assessment Results**	**261 days**	**Wed 7/1/15**	**Wed 6/29/16**	
274	**Reporting Files - Specs**	**65 days**	**Wed 7/1/15**	**Tue 9/29/15**	
275	Reporting: Data File Layout review rounds	45 days	Wed 7/1/15	Tue 9/1/15	Pearson
276	Reporting: Score Report Shells review rounds	60 days	Wed 7/1/15	Tue 9/22/15	Pearson
277	Reporting: Individual Student Level File Layout - CDE Review Final	5 days	Wed 9/2/15	Tue 9/8/15	CDE
278	Reporting: Individual Student Level Report Shells – CDE Review Final	5 days	Wed 9/23/15	Tue 9/29/15	CDE
279	Reporting: State Level File Layouts – CDE Review Final	5 days	Wed 9/2/15	Tue 9/8/15	CDE
280	Reporting: District Level File Layouts – CDE Review Final	5 days	Wed 9/2/15	Tue 9/8/15	CDE
281	Reporting: District Level Report Shells – CDE Review Final	5 days	Wed 9/23/15	Tue 9/29/15	CDE

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
282	Reporting: School Level File Layouts – CDE Review Final	5 days	Wed 9/2/15	Tue 9/8/15	CDE
283	Reporting: School Level Report Shells – CDE Review Final	5 days	Wed 9/23/15	Tue 9/29/15	CDE
284	**Fall 2015**	**150 days**	**Wed 7/1/15**	**Tue 1/26/16**	
285	**Reports**	**52 days**	**Mon 11/16/15**	**Tue 1/26/16**	
286	Student Biographical Data Review Window	10 days	Mon 11/16/15	Fri 11/27/15	CO DISTRICTS
287	**Operational Reporting - Science and Social Studies**	**16 days**	**Tue 1/5/16**	**Tue 1/26/16**	
288	Reporting: QC of Individual Student Level File – CDE Review	1 day	Tue 1/5/16	Tue 1/5/16	CDE
289	Reporting: QC of Individual Student Level File – CDE Verification	0 days	Tue 1/5/16	Tue 1/5/16	CDE
290	Reporting: Individual Student Level File Posted	0 days	Tue 1/5/16	Tue 1/5/16	Pearson
291	Reporting: Individual Student Report Bellwethers	2 days	Mon 1/11/16	Tue 1/12/16	CDE
292	Reporting: Individual Student Level File Electronic Reports Posted	0 days	Fri 1/15/16	Fri 1/15/16	Pearson
293	Reporting: Individual Student Level Hard Copy Reports in District	0 days	Tue 1/26/16	Tue 1/26/16	Pearson
294	**State Level Files**	**8 days**	**Mon 12/28/15**	**Wed 1/6/16**	
295	Pearson updates scoring system and produces/verifies State Level File	6 days	Mon 12/28/15	Mon 1/4/16	Pearson
296	Reporting: QC of State Level File(s) – CDE Review	2 days	Tue 1/5/16	Wed 1/6/16	CDE
297	Reporting: QC of State Level File(s) – CDE Verification	0 days	Wed 1/6/16	Wed 1/6/16	CDE
298	Reporting: State Level File(s) Posted	0 days	Wed 1/6/16	Wed 1/6/16	Pearson
299	**District Level Files**	**10 days**	**Tue 1/5/16**	**Mon 1/18/16**	
300	Reporting: QC of District Level File(s) – CDE Review	2 days	Tue 1/5/16	Wed 1/6/16	CDE
301	Reporting: QC of District Level File(s) – CDE Verification	0 days	Wed 1/6/16	Wed 1/6/16	CDE
302	Reporting: District Level File(s) Posted	0 days	Wed 1/6/16	Wed 1/6/16	Pearson
303	Reporting: District Reports Bellwethers	2 days	Tue 1/12/16	Wed 1/13/16	CDE
304	Reporting: District Electronic Reports Posted	0 days	Mon 1/18/16	Mon 1/18/16	Pearson
305	**School Level Files**	**10 days**	**Tue 1/5/16**	**Mon 1/18/16**	
306	Reporting: QC of School Level File(s) – CDE Review	2 days	Tue 1/5/16	Wed 1/6/16	CDE
307	Reporting: QC of School Level File(s) – CDE Verification	0 days	Wed 1/6/16	Wed 1/6/16	CDE
308	Reporting: School Level File(s) Posted	0 days	Wed 1/6/16	Wed 1/6/16	Pearson
309	Reporting: School Reports Bellwethers	2 days	Tue 1/12/16	Wed 1/13/16	CDE
310	Reporting: School Electronic Reports Posted	0 days	Mon 1/18/16	Mon 1/18/16	Pearson
311	**Interpretive Guide**	**134 days**	**Wed 7/1/15**	**Mon 1/4/16**	
312	Interpretive Guide review rounds	129 days	Wed 7/1/15	Mon 12/28/15	Pearson
313	Assessment Interpretive Guide – Review Final	5 days	Tue 12/29/15	Mon 1/4/16	CDE
314	Assessment Interpretive Guide Posted	0 days	Mon 1/4/16	Mon 1/4/16	Pearson
315	**Spring 2016**	**193 days**	**Mon 10/5/15**	**Wed 6/29/16**	
316	**Reports**	**30 days**	**Thu 5/19/16**	**Wed 6/29/16**	
317	Student Biographical Data Review Window	10 days	Thu 5/19/16	Wed 6/1/16	CO DISTRICTS
318	**Operational Reporting - Science and Social Studies**	**16 days**	**Wed 6/8/16**	**Wed 6/29/16**	
319	Reporting: QC of Individual Student Level File – CDE Review	1 day	Wed 6/8/16	Wed 6/8/16	CDE
320	Reporting: QC of Individual Student Level File – CDE Verification	0 days	Wed 6/8/16	Wed 6/8/16	CDE
321	Reporting: Individual Student Level File Posted	0 days	Wed 6/8/16	Wed 6/8/16	Pearson
322	Reporting: Individual Student Report Bellwethers	2 days	Tue 6/14/16	Wed 6/15/16	CDE
323	Reporting: Individual Student Level File Electronic Reports Posted	0 days	Mon 6/20/16	Mon 6/20/16	Pearson
324	Reporting: Individual Student Level Hard Copy Reports in District	0 days	Wed 6/29/16	Wed 6/29/16	Pearson
325	**State Level Files**	**8 days**	**Thu 6/9/16**	**Mon 6/20/16**	
326	Pearson updates scoring system and produces/verifies State Level File	6 days	Thu 6/9/16	Thu 6/16/16	Pearson
327	Reporting: QC of State Level File(s) – CDE Review	2 days	Fri 6/17/16	Mon 6/20/16	CDE
328	Reporting: QC of State Level File(s) – CDE Verification	0 days	Mon 6/20/16	Mon 6/20/16	CDE

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
329	Reporting: State Level File(s) Posted	0 days	Mon 6/20/16	Mon 6/20/16	Pearson
330	**District Level Files**	**10 days**	**Thu 6/9/16**	**Wed 6/22/16**	
331	Reporting: QC of District Level File(s) – CDE Review	2 days	Thu 6/9/16	Fri 6/10/16	CDE
332	Reporting: QC of District Level File(s) – CDE Verification	0 days	Fri 6/10/16	Fri 6/10/16	CDE
333	Reporting: District Level File(s) Posted	0 days	Fri 6/10/16	Fri 6/10/16	Pearson
334	Reporting: District Reports Bellwethers	2 days	Thu 6/16/16	Fri 6/17/16	CDE
335	Reporting: District Electronic Reports Posted	0 days	Wed 6/22/16	Wed 6/22/16	Pearson
336	**School Level Files**	**10 days**	**Thu 6/9/16**	**Wed 6/22/16**	
337	Reporting: QC of School Level File(s) – CDE Review	2 days	Thu 6/9/16	Fri 6/10/16	CDE
338	Reporting: QC of School Level File(s) – CDE Verification	0 days	Fri 6/10/16	Fri 6/10/16	CDE
339	Reporting: School Level File(s) Posted	0 days	Fri 6/10/16	Fri 6/10/16	Pearson
340	Reporting: School Reports Bellwethers	2 days	Thu 6/16/16	Fri 6/17/16	CDE
341	Reporting: School Electronic Reports Posted	0 days	Wed 6/22/16	Wed 6/22/16	Pearson
342	**Interpretive Guide**	**65 days**	**Mon 10/5/15**	**Fri 1/1/16**	
343	Interpretive Guide review rounds	60 days	Mon 10/5/15	Fri 12/25/15	Pearson
344	Assessment Interpretive Guide – Review Final	5 days	Mon 12/28/15	Fri 1/1/16	CDE
345	Assessment Interpretive Guide Posted	0 days	Fri 1/1/16	Fri 1/1/16	Pearson
346	**Psychometric, Research, and Technical Activities**	**293 days**	**Wed 7/1/15**	**Mon 8/15/16**	
347	**Fall HS Field Test and Operational Analysis**	**147 days**	**Wed 7/1/15**	**Thu 1/21/16**	
348	Field Test- Sampling Design	60 days	Wed 7/1/15	Tue 9/22/15	Pearson
349	Psychometric Analysis of Field Test	30 days	Fri 12/11/15	Thu 1/21/16	Pearson
350	Operational Analysis	11 days	Fri 12/11/15	Fri 12/25/15	Pearson
351	CDE Review and Approval of Equating Results	1 day	Mon 12/28/15	Mon 12/28/15	CDE
352	**Spring ES/MS Field Test and Operational Analysis**	**261 days**	**Wed 7/1/15**	**Wed 6/29/16**	
353	Field Test- Sampling Design	60 days	Wed 7/1/15	Tue 9/22/15	Pearson
354	Psychometric Analysis of Field Test	30 days	Thu 5/19/16	Wed 6/29/16	Pearson
355	Operational Analysis	11 days	Thu 5/19/16	Thu 6/2/16	Pearson
356	CDE Review and Approval of Equating Results	1 day	Fri 6/3/16	Fri 6/3/16	CDE
357	**Equating**	**111 days**	**Wed 7/1/15**	**Wed 12/2/15**	
358	Linking and Equating Presentation to TAC 3	2 days	Tue 12/1/15	Wed 12/2/15	Pearson
359	Alignment Studies	20 days	Wed 7/1/15	Tue 7/28/15	Pearson
360	**TAC Meetings**	**112 days**	**Tue 9/1/15**	**Wed 2/3/16**	
361	TAC Meeting 1	2 days	Tue 9/1/15	Wed 9/2/15	Pearson
362	TAC Meeting 2	2 days	Tue 12/1/15	Wed 12/2/15	Pearson
363	TAC Meeting 3	2 days	Tue 2/2/16	Wed 2/3/16	Pearson
364	**Technical Reports**	**268 days**	**Wed 8/5/15**	**Mon 8/15/16**	
365	Technical Report – Final version to CDE	0 days	Mon 8/15/16	Mon 8/15/16	Pearson
366	Irregularity and Data Forensic Report	10 days	Wed 8/5/15	Tue 8/18/15	Pearson
367	**Training and Support**	**178 days**	**Wed 7/1/15**	**Fri 3/4/16**	
368	Understanding Assessment Results Training Materials review rounds	20 days	Wed 7/1/15	Tue 7/28/15	Pearson
369	Understanding Assessment Results Training Material - CDE Final Review	5 days	Wed 7/29/15	Tue 8/4/15	CDE
370	Understanding Assessment Results Training	5 days	Mon 8/24/15	Fri 8/28/15	Pearson
371	Technology Director Training Material review rounds	60 days	Wed 7/1/15	Tue 9/22/15	Pearson
372	Technology Director Training Material CDE Review Final	5 days	Wed 9/23/15	Tue 9/29/15	CDE
373	Conduct Technology Director Training	5 days	Mon 2/1/16	Fri 2/5/16	Pearson
374	Assessment Administration Training Material review rounds	30 days	Mon 1/4/16	Fri 2/12/16	Pearson
375	Assessment Administration Training Material CDE Review Final	5 days	Mon 2/15/16	Fri 2/19/16	CDE

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
376	Conduct Assessment Administration Training	5 days	Mon 2/29/16	Fri 3/4/16	Pearson
377	Online Training Support Materials	0 days	Mon 2/8/16	Mon 2/8/16	Pearson
378	**Customer Service**	**261 days?**	**Wed 7/1/15**	**Thu 6/30/16**	
379	Customer feedback survey	0 days	Thu 6/30/16	Thu 6/30/16	Pearson
380	Establish DAC Website	20 days	Wed 7/1/15	Tue 7/28/15	Pearson
381		1 day?	Wed 7/1/15	Wed 7/1/15	

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
0	**CO Alternate Assessment - FY2017**	**542 days**	**Wed 6/1/16**	**Fri 6/29/18**	
1	**START**	**542 days**	**Wed 6/1/16**	**Fri 6/29/18**	
2	**General**	**5 days**	**Fri 7/1/16**	**Thu 7/7/16**	
3	Security Plan updated and rebaselined	5 days	Fri 7/1/16	Thu 7/7/16	Pearson
4	**Program Management**	**413 days**	**Fri 7/1/16**	**Tue 1/30/18**	
5	**Project Schedule**	**9 days**	**Fri 7/1/16**	**Wed 7/13/16**	
6	Draft Project Schedule Created	4 days	Fri 7/1/16	Wed 7/6/16	Pearson
7	Project Schedule - CDE Review	3 days	Thu 7/7/16	Mon 7/11/16	CDE
8	Project Schedule - CDE and Pearson Joint Review	1 day	Tue 7/12/16	Tue 7/12/16	Pearson/CDE
9	Project Schedule Updated and Baselined	1 day	Wed 7/13/16	Wed 7/13/16	Pearson
10	**Project Meetings**	**229 days**	**Fri 7/1/16**	**Wed 5/17/17**	
11	**Project Meeting 1**	**14 days**	**Fri 7/1/16**	**Wed 7/20/16**	
12	Agenda Drafted and Delivered to CDE	2 days	Fri 7/1/16	Mon 7/4/16	Pearson
13	Meeting held (Denver, CO)	2 days	Tue 7/12/16	Wed 7/13/16	
14	Meeting Minutes Distributed	5 days	Thu 7/14/16	Wed 7/20/16	Pearson
15	**Project Meeting 2**	**15 days**	**Thu 9/1/16**	**Wed 9/21/16**	
16	Agenda Drafted and Delivered to CDE	2 days	Thu 9/1/16	Fri 9/2/16	Pearson
17	Meeting held (Denver, CO)	2 days	Tue 9/13/16	Wed 9/14/16	
18	Meeting Minutes Distributed	5 days	Thu 9/15/16	Wed 9/21/16	Pearson
19	**Project Meeting 3 - In person**	**12 days**	**Tue 11/1/16**	**Wed 11/16/16**	
20	Agenda Drafted and Delivered to CDE	2 days	Tue 11/1/16	Wed 11/2/16	Pearson
21	Meeting held (San Antonio, TX)	2 days	Tue 11/8/16	Wed 11/9/16	
22	Meeting Minutes Distributed	5 days	Thu 11/10/16	Wed 11/16/16	Pearson
23	**Project Meeting 4**	**13 days**	**Mon 1/2/17**	**Wed 1/18/17**	
24	Agenda Drafted and Delivered to CDE	2 days	Mon 1/2/17	Tue 1/3/17	Pearson
25	Meeting held (Denver, CO)	2 days	Tue 1/10/17	Wed 1/11/17	
26	Meeting Minutes Distributed	5 days	Thu 1/12/17	Wed 1/18/17	Pearson
27	**Project Meeting 5**	**16 days**	**Wed 3/1/17**	**Wed 3/22/17**	
28	Agenda Drafted and Delivered to CDE	2 days	Wed 3/1/17	Thu 3/2/17	Pearson
29	Meeting held (Denver, CO)	2 days	Tue 3/14/17	Wed 3/15/17	
30	Meeting Minutes Distributed	5 days	Thu 3/16/17	Wed 3/22/17	Pearson
31	**Project Meeting 6 - In person**	**13 days**	**Mon 5/1/17**	**Wed 5/17/17**	
32	Agenda Drafted and Delivered to CDE	2 days	Mon 5/1/17	Tue 5/2/17	Pearson
33	Meeting held (San Antonio, TX)	2 days	Tue 5/9/17	Wed 5/10/17	
34	Meeting Minutes Distributed	5 days	Thu 5/11/17	Wed 5/17/17	Pearson
35	**Monthy Reports**	**241 days**	**Wed 8/3/16**	**Thu 7/6/17**	
36	Jul	0 days	Wed 8/3/16	Wed 8/3/16	Pearson
37	Aug	0 days	Mon 9/5/16	Mon 9/5/16	Pearson
38	Sep	0 days	Wed 10/5/16	Wed 10/5/16	Pearson
39	Oct	0 days	Thu 11/3/16	Thu 11/3/16	Pearson
40	Nov	0 days	Mon 12/5/16	Mon 12/5/16	Pearson
41	Dec	0 days	Wed 1/4/17	Wed 1/4/17	Pearson
42	Jan	0 days	Fri 2/3/17	Fri 2/3/17	Pearson
43	Feb	0 days	Fri 3/3/17	Fri 3/3/17	Pearson
44	Mar	0 days	Wed 4/5/17	Wed 4/5/17	Pearson
45	Apr	0 days	Wed 5/3/17	Wed 5/3/17	Pearson
46	May	0 days	Mon 6/5/17	Mon 6/5/17	Pearson

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
47	Jun	0 days	Thu 7/6/17	Thu 7/6/17	Pearson
48	**DAC**	**107 days**	**Wed 10/19/16**	**Thu 3/16/17**	
49	DAC Academy	2 days	Tue 2/21/17	Wed 2/22/17	Pearson
50	DAC Management 1	2 days	Wed 10/19/16	Thu 10/20/16	Pearson
51	DAC Management 2	2 days	Wed 3/15/17	Thu 3/16/17	Pearson
52	**Program Improvement**	**348 days**	**Fri 9/30/16**	**Tue 1/30/18**	
53	Program Improvement Plan - Development	15 days	Fri 5/12/17	Thu 6/1/17	Pearson
54	Program Improvement Plan - Production	15 days	Mon 1/2/17	Fri 1/20/17	Pearson
55	Program Improvement Plan - Shipping and Receipt	15 days	Tue 3/28/17	Mon 4/17/17	Pearson
56	Program Improvement Plan - Administration	15 days	Mon 5/1/17	Fri 5/19/17	Pearson
57	Program Improvement Plan - Scanning	15 days	Fri 11/11/16	Thu 12/1/16	Pearson
58	Program Improvement Plan - Scoring	15 days	Fri 9/30/16	Thu 10/20/16	Pearson
59	Program Improvement Plan - Data Processing	15 days	Mon 1/2/17	Fri 1/20/17	Pearson
60	Program Improvement Plan - Reporting and Psychometrics	15 days	Wed 1/10/18	Tue 1/30/18	Pearson
61	Program Improvement Plan - Meetings	15 days	Mon 10/10/16	Fri 10/28/16	Pearson
62	**Invoices**	**239 days**	**Fri 9/30/16**	**Thu 8/31/17**	
63	Invoice Q1	0 days	Fri 9/30/16	Fri 9/30/16	Pearson
64	Invoice Q2	0 days	Fri 12/30/16	Fri 12/30/16	Pearson
65	Invoice Q3	0 days	Fri 3/31/17	Fri 3/31/17	Pearson
66	Invoice Q4	0 days	Thu 6/15/17	Thu 6/15/17	Pearson
67	Invoice - "tail"	0 days	Thu 8/31/17	Thu 8/31/17	Pearson
68	**Assessment Development**	**297 days**	**Wed 6/1/16**	**Thu 7/20/17**	
69	**Documents - Development Specs**	**0 days**	**Fri 7/1/16**	**Fri 7/1/16**	
70	Eligible Content Document - Final	0 days	Fri 7/1/16	Fri 7/1/16	Pearson
71	Claims Document - Final	0 days	Fri 7/1/16	Fri 7/1/16	Pearson
72	Reporting Categories Document - Final	0 days	Fri 7/1/16	Fri 7/1/16	Pearson
73	Assessment Framework - Final	0 days	Fri 7/1/16	Fri 7/1/16	Pearson
74	Performance Level Descriptors – General - Final	0 days	Fri 7/1/16	Fri 7/1/16	Pearson
75	Performance Level Descriptors – Grade Level Specific - Final	0 days	Fri 7/1/16	Fri 7/1/16	Pearson
76	Test Blueprints/Specifications - Final	0 days	Fri 7/1/16	Fri 7/1/16	Pearson
77	**Style Guide**	**30 days**	**Fri 7/1/16**	**Thu 8/11/16**	
78	Colorado Style Guide - Updates	30 days	Fri 7/1/16	Thu 8/11/16	Pearson
79	Colorado Style Guide - Final for year	0 days	Thu 8/11/16	Thu 8/11/16	Pearson
80	**Passages**	**124 days**	**Thu 9/15/16**	**Tue 3/7/17**	
81	Recruit Passage Reviewers	25 days	Mon 1/2/17	Fri 2/3/17	Pearson
82	Passage Develoment	89 days	Thu 9/15/16	Tue 1/17/17	Pearson
83	Passage Selection - CDE Review	10 days	Wed 1/18/17	Tue 1/31/17	CDE
84	Prepare Passage Review Training Meeting materials	5 days	Wed 2/1/17	Tue 2/7/17	Pearson
85	Passage Review Training Meeting Materials- CDE Review	5 days	Wed 2/8/17	Tue 2/14/17	CDE
86	Edit and ship materials after CDE review	9 days	Wed 2/15/17	Mon 2/27/17	Pearson
87	Passage Review	1 day	Tue 2/28/17	Tue 2/28/17	Pearson
88	Send final results of Passage Review meeting to CDE	5 days	Wed 3/1/17	Tue 3/7/17	Pearson
89	**Item Development (Spring 2018 Field Test)**	**134 days**	**Mon 1/16/17**	**Thu 7/20/17**	
90	Item Writer Recruiting	25 days	Mon 1/16/17	Fri 2/17/17	Pearson
91	Develop Training Materials and Item Development Plans	5 days	Wed 2/15/17	Tue 2/21/17	Pearson
92	Item Development Meeting 1 Materials – CDE Review	5 days	Wed 2/22/17	Tue 2/28/17	CDE
93	Edit materials after CDE review	4 days	Wed 3/1/17	Mon 3/6/17	Pearson

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
94	Item Development Meeting 1	2 days	Tue 3/7/17	Wed 3/8/17	Pearson
95	Provide developers feedback	51 days	Fri 3/10/17	Fri 5/19/17	Pearson
96	Develop training materials and item development plans (meeting 2)	5 days	Mon 5/22/17	Fri 5/26/17	Pearson
97	Item Writer Recruiting	25 days	Tue 4/25/17	Mon 5/29/17	Pearson
98	Item Development Meeting 2 Materials – CDE Review	3 days	Mon 5/29/17	Wed 5/31/17	CDE
99	Edit materials after CDE review	3 days	Thu 6/1/17	Mon 6/5/17	Pearson
100	Item Development Meeting 2	2 days	Tue 6/6/17	Wed 6/7/17	Pearson
101	Provide developers feedback	10 days	Fri 6/9/17	Thu 6/22/17	Pearson
102	Conduct internal Content and Editorial Reviews	20 days	Fri 6/23/17	Thu 7/20/17	Pearson
103	**Content and Bias Review (Spring 2017 Field Test)**	**65 days**	**Mon 7/11/16**	**Fri 10/7/16**	
104	Item Review – CDE Review (newly written items)	5 days	Wed 7/27/16	Tue 8/2/16	CDE
105	Recruit Content Review Participants	20 days	Mon 7/11/16	Fri 8/5/16	CDE
106	Creates Training materials for Content and Bias/sensitivity Reviews	4 days	Fri 7/29/16	Wed 8/3/16	Pearson
107	Content and Bias/Sensitivity Review Training Materials – CDE Review	3 days	Thu 8/4/16	Mon 8/8/16	Pearson
108	Edit and ship materials after CDE review	10 days	Tue 8/9/16	Mon 8/22/16	CDE
109	Content and Bias Review Meeting	2 days	Tue 8/23/16	Wed 8/24/16	Pearson
110	Implements edits suggested by committee	30 days	Fri 8/26/16	Thu 10/6/16	Pearson
111	Sends final results of Content and Bias Sensitivity Review meeting	1 day	Fri 10/7/16	Fri 10/7/16	Pearson
112	**Data Review**	**162 days**	**Wed 6/1/16**	**Thu 1/12/17**	
113	**Elem/Middle**	**53 days**	**Wed 6/1/16**	**Fri 8/12/16**	
114	Recruit Data Review Participants	25 days	Wed 6/1/16	Tue 7/5/16	Pearson
115	CSS Creates Data Review Training Materials	5 days	Fri 7/1/16	Thu 7/7/16	Pearson
116	Produce Data Review Training Materials – CDE Review	4 days	Fri 7/8/16	Wed 7/13/16	CDE
117	Edit and ship materials after CDE review	10 days	Thu 7/14/16	Wed 7/27/16	Pearson
118	Conduct Data Review meeting	1 day	Thu 7/28/16	Thu 7/28/16	Pearson
119	Implement edits suggested by committee	10 days	Fri 7/29/16	Thu 8/11/16	Pearson
120	Provide final results of Data Review Meetings	1 day	Fri 8/12/16	Fri 8/12/16	Pearson
121	**High School**	**31 days**	**Thu 12/1/16**	**Thu 1/12/17**	
122	Recruit Data Review Participants	25 days	Thu 12/1/16	Wed 1/4/17	Pearson
123	CSS Creates Data Review Training Materials	5 days	Thu 12/1/16	Wed 12/7/16	Pearson
124	Produce Data Review Training Materials – CDE Review	4 days	Thu 12/8/16	Tue 12/13/16	CDE
125	Edit and ship materials after CDE review	10 days	Wed 12/14/16	Tue 12/27/16	Pearson
126	Conduct Data Review meeting	1 day	Wed 12/28/16	Wed 12/28/16	Pearson
127	Implement edits suggested by committee	10 days	Thu 12/29/16	Wed 1/11/17	Pearson
128	Provide final results of Data Review Meetings	1 day	Thu 1/12/17	Thu 1/12/17	Pearson
129	**Form Development**	**235 days**	**Fri 7/1/16**	**Thu 5/25/17**	
130	**Elem/Middle**	**126 days**	**Fri 7/1/16**	**Fri 12/23/16**	
131	**Core Test Form Development**	**35 days**	**Mon 8/15/16**	**Fri 9/30/16**	
132	Construct forms	20 days	Mon 8/15/16	Fri 9/9/16	Pearson
133	CDE reviews forms	5 days	Mon 9/12/16	Fri 9/16/16	CDE
134	Revise forms based on CDE review	5 days	Mon 9/19/16	Fri 9/23/16	Pearson
135	Core Test Form Development – CDE Review Final	5 days	Mon 9/26/16	Fri 9/30/16	CDE
136	Core Test Form Development – Final	0 days	Fri 9/30/16	Fri 9/30/16	Pearson
137	**Embedded Field Test Form Development**	**50 days**	**Mon 10/3/16**	**Fri 12/9/16**	
138	Construct forms	35 days	Mon 10/3/16	Fri 11/18/16	Pearson
139	CDE reviews forms	5 days	Mon 11/21/16	Fri 11/25/16	Pearson
140	Revise forms based on CDE review	5 days	Mon 11/28/16	Fri 12/2/16	CDE

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
141	Embedded Field Test Form Development – Final	5 days	Mon 12/5/16	Fri 12/9/16	Pearson
142	Send Production ready files to Pearson (Files to Print)	0 days	Fri 12/9/16	Fri 12/9/16	Pearson
143	**Certification for District Translators**	**65 days**	**Fri 7/1/16**	**Thu 9/29/16**	
144	Procedures documente produced	60 days	Fri 7/1/16	Thu 9/22/16	Pearson
145	Procedures for Certification for District Translators – CDE Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
146	**Test/Ancillary Material - Development**	**126 days**	**Fri 7/1/16**	**Fri 12/23/16**	**Pearson**
147	District and School Assessment Coordinator review rounds	60 days	Fri 7/1/16	Thu 9/22/16	Pearson
148	Document Development: District and School Assessment Coordinators Manual – CDE Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
149	Examiners Manual review rounds	30 days	Mon 10/10/16	Fri 11/18/16	Pearson
150	Document Development: Examiners Manual – CDE Review Final	5 days	Mon 11/21/16	Fri 11/25/16	CDE
151	Certification Forms review rounds	60 days	Fri 7/1/16	Thu 9/22/16	Pearson
152	Document Development: Certification Forms – CDE Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
153	Document Development: Test Booklets – CDE Review Final	5 days	Mon 12/19/16	Fri 12/23/16	CDE
154	Ancillary Materials (Manipulatives) review rounds	60 days	Fri 7/1/16	Thu 9/22/16	Pearson
155	Document Development: Ancillary Materials – CDE Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
156	**High School**	**235 days**	**Fri 7/1/16**	**Thu 5/25/17**	
157	**Core Test Form Development**	**35 days**	**Fri 1/13/17**	**Thu 3/2/17**	
158	Construct forms	20 days	Fri 1/13/17	Thu 2/9/17	Pearson
159	CDE reviews forms	5 days	Fri 2/10/17	Thu 2/16/17	CDE
160	Revise forms based on CDE review	5 days	Fri 2/17/17	Thu 2/23/17	Pearson
161	Core Test Form Development – CDE Review Final	5 days	Fri 2/24/17	Thu 3/2/17	CDE
162	Core Test Form Development – Final	0 days	Thu 3/2/17	Thu 3/2/17	Pearson
163	**Embedded Field Test Form Development**	**50 days**	**Fri 3/3/17**	**Thu 5/11/17**	
164	Construct forms	35 days	Fri 3/3/17	Thu 4/20/17	Pearson
165	CDE reviews forms	5 days	Fri 4/21/17	Thu 4/27/17	Pearson
166	Revise forms based on CDE review	5 days	Fri 4/28/17	Thu 5/4/17	CDE
167	Embedded Field Test Form Development – Final	5 days	Fri 5/5/17	Thu 5/11/17	Pearson
168	Send Production ready files to Pearson (Files to Print)	0 days	Thu 5/11/17	Thu 5/11/17	Pearson
169	**Certification for District Translators**	**65 days**	**Fri 7/1/16**	**Thu 9/29/16**	
170	Procedures documente produced	60 days	Fri 7/1/16	Thu 9/22/16	Pearson
171	Procedures for Certification for District Translators – CDE Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
172	**Test/Ancillary Material - Development**	**235 days**	**Fri 7/1/16**	**Thu 5/25/17**	**Pearson**
173	District and School Assessment Coordinator review rounds	60 days	Fri 7/1/16	Thu 9/22/16	Pearson
174	Document Development: District and School Assessment Coordinators Manual – CDE Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
175	Examiners Manual review rounds	30 days	Mon 10/10/16	Fri 11/18/16	Pearson
176	Document Development: Examiners Manual – CDE Review Final	5 days	Mon 11/21/16	Fri 11/25/16	CDE
177	Certification Forms review rounds	60 days	Fri 7/1/16	Thu 9/22/16	Pearson
178	Document Development: Certification Forms – CDE Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
179	Document Development: Test Booklets – CDE Review Final	5 days	Fri 5/19/17	Thu 5/25/17	CDE
180	Ancillary Materials (Manipulatives) review rounds	60 days	Fri 7/1/16	Thu 9/22/16	Pearson
181	Document Development: Ancillary Materials – CDE Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
182	**Assessment Administration**	**520 days**	**Fri 7/1/16**	**Fri 6/29/18**	
183	**Fall 2016**	**520 days**	**Fri 7/1/16**	**Fri 6/29/18**	
184	**Orders for Materials**	**45 days**	**Thu 9/1/16**	**Wed 11/2/16**	
185	Materials Ordering System Operational	0 days	Thu 9/1/16	Thu 9/1/16	Pearson
186	Materials Ordering Window	15 days	Thu 9/1/16	Wed 9/21/16	Pearson
187	Online Rosters Generated	5 days	Thu 9/22/16	Wed 9/28/16	Pearson

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
188	Additional Materials Ordering Window	30 days	Thu 9/22/16	Wed 11/2/16	Pearson
189	**Test/Ancillary Material - Production**	**15 days**	**Fri 7/1/16**	**Thu 7/21/16**	
190	Proctors Manual Produced	15 days	Fri 7/1/16	Thu 7/21/16	Pearson
191	Test Booklets Produced	15 days	Fri 7/1/16	Thu 7/21/16	CDE
192	Ancillaries Produced	15 days	Fri 7/1/16	Thu 7/21/16	Pearson
193	**Packaging and Delivery**	**72 days**	**Fri 7/1/16**	**Mon 10/10/16**	
194	Colorado Districts in Shipping System	0 days	Fri 7/1/16	Fri 7/1/16	Pearson
195	Packaging Specifications Finalized	0 days	Fri 7/1/16	Fri 7/1/16	Pearson
196	Non-secure Materials Packaged	15 days	Thu 9/15/16	Wed 10/5/16	Pearson
197	Non-secure Materials Shipped	3 days	Thu 10/6/16	Mon 10/10/16	Pearson
198	Non-secure Materials in District	0 days	Mon 10/10/16	Mon 10/10/16	Pearson
199	Secure Materials Packaged	15 days	Thu 9/15/16	Wed 10/5/16	Pearson
200	Secure Materials Shipped	3 days	Thu 10/6/16	Mon 10/10/16	Pearson
201	Secure Materials in District	0 days	Mon 10/10/16	Mon 10/10/16	Pearson
202	**Test Administration**	**15 days**	**Tue 10/24/17**	**Mon 11/13/17**	
203	Operational Test Administration Window	15 days	Tue 10/24/17	Mon 11/13/17	
204	Online Score Submission Window	15 days	Tue 10/24/17	Mon 11/13/17	
205	**Material Return and Verification**	**161 days**	**Wed 11/15/17**	**Fri 6/29/18**	
206	To Be Scored Materials Return Shipment	0 days	Wed 11/15/17	Wed 11/15/17	Pearson
207	Not To Be Scored Materials Return Shipment	0 days	Wed 11/15/17	Wed 11/15/17	Pearson
208	Non-scored Materials Destruction	0 days	Fri 12/29/17	Fri 12/29/17	Pearson
209	Scored Materials Destruction	0 days	Fri 6/29/18	Fri 6/29/18	Pearson
210	Secure Materials Verification – Initial Report	0 days	Wed 11/29/17	Wed 11/29/17	Pearson
211	Secure Materials Verification – Weekly Report	0 days	Wed 12/6/17	Wed 12/6/17	Pearson
212	Secure Materials Verification – Final Report	0 days	Wed 12/13/17	Wed 12/13/17	Pearson
213	**Test Monitoring**	**362 days**	**Fri 7/1/16**	**Mon 11/20/17**	
214	Test Monitoring Protocol review rounds	60 days	Fri 7/1/16	Thu 9/22/16	Pearson
215	Test Monitoring Protocol – CDE Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
216	Test Monitoring Sites Selected	0 days	Mon 1/16/17	Mon 1/16/17	Pearson
217	Test Monitoring Sites Notified – TBD if needed	0 days	Mon 2/13/17	Mon 2/13/17	Pearson
218	Test Monitoring	20 days	Tue 10/24/17	Mon 11/20/17	Pearson
219	**Spring 2017**	**520 days**	**Fri 7/1/16**	**Fri 6/29/18**	
220	**Orders for Materials**	**60 days**	**Thu 2/2/17**	**Wed 4/26/17**	
221	Pre-ID File Transfer	0 days	Thu 2/2/17	Thu 2/2/17	CDE
222	Materials Ordering System Operational	0 days	Thu 2/2/17	Thu 2/2/17	Pearson
223	Materials Ordering Window	15 days	Thu 2/2/17	Wed 2/22/17	Pearson
224	Online Rosters Generated	5 days	Thu 2/23/17	Wed 3/1/17	Pearson
225	Additional Materials Ordering Window	35 days	Thu 3/9/17	Wed 4/26/17	Pearson
226	**Test/Ancillary Material - Production**	**66 days**	**Fri 9/30/16**	**Fri 12/30/16**	
227	Test Booklets Produced	15 days	Mon 12/12/16	Fri 12/30/16	CDE
228	Ancillaries Produced	15 days	Fri 9/30/16	Thu 10/20/16	Pearson
229	**Packaging and Delivery**	**61 days**	**Mon 1/2/17**	**Mon 3/27/17**	
230	Colorado Districts in Shipping System	0 days	Thu 2/2/17	Thu 2/2/17	Pearson
231	Packaging Specifications Finalized	0 days	Mon 1/2/17	Mon 1/2/17	Pearson
232	Non-secure Materials Packaged	15 days	Thu 3/2/17	Wed 3/22/17	Pearson
233	Non-secure Materials Shipped	3 days	Thu 3/23/17	Mon 3/27/17	Pearson
234	Non-secure Materials in District	0 days	Mon 3/27/17	Mon 3/27/17	Pearson

ID	Task Name	Duration	Start	Finish	Resource Names
				Colorado Alternate Schedule - FY2017	
235	Secure Materials Packaged	15 days	Thu 3/2/17	Wed 3/22/17	Pearson
236	Secure Materials Shipped	3 days	Thu 3/23/17	Mon 3/27/17	Pearson
237	Secure Materials in District	0 days	Mon 3/27/17	Mon 3/27/17	Pearson
238	**Test Administration**	**15 days**	**Mon 4/10/17**	**Fri 4/28/17**	
239	Operational Test Administration Window	15 days	Mon 4/10/17	Fri 4/28/17	
240	Online Score Submission Window	15 days	Mon 4/10/17	Fri 4/28/17	
241	**Material Return and Verification**	**302 days**	**Tue 5/2/17**	**Fri 6/29/18**	
242	To Be Scored Materials Return Shipment	0 days	Tue 5/2/17	Tue 5/2/17	Pearson
243	Not To Be Scored Materials Return Shipment	0 days	Tue 5/2/17	Tue 5/2/17	Pearson
244	Non-scored Materials Destruction	0 days	Fri 12/29/17	Fri 12/29/17	Pearson
245	Scored Materials Destruction	0 days	Fri 6/29/18	Fri 6/29/18	Pearson
246	Secure Materials Verification – Initial Report	0 days	Tue 5/16/17	Tue 5/16/17	Pearson
247	Secure Materials Verification – Weekly Report	0 days	Tue 5/23/17	Tue 5/23/17	Pearson
248	Secure Materials Verification – Final Report	0 days	Tue 5/30/17	Tue 5/30/17	Pearson
249	**Test Monitoring**	**221 days**	**Fri 7/1/16**	**Fri 5/5/17**	
250	Test Monitoring Protocol review rounds	60 days	Fri 7/1/16	Thu 9/22/16	Pearson
251	Test Monitoring Protocol – CDE Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
252	Test Monitoring Sites Selected	0 days	Mon 1/16/17	Mon 1/16/17	Pearson
253	Test Monitoring Sites Notified – TBD if needed	0 days	Mon 2/13/17	Mon 2/13/17	Pearson
254	Test Monitoring	20 days	Mon 4/10/17	Fri 5/5/17	Pearson
255	**Scanning and Scoring**	**261 days**	**Fri 7/1/16**	**Fri 6/30/17**	
256	**Scoring Processes - Fall 2016**	**131 days**	**Fri 7/1/16**	**Fri 12/30/16**	
257	Scoring Procedures review rounds	40 days	Fri 7/1/16	Thu 8/25/16	Pearson
258	Scoring Procedures - CDE Review Final	5 days	Fri 8/26/16	Thu 9/1/16	CDE
259	Scoring Materials review rounds	50 days	Fri 9/2/16	Thu 11/10/16	Pearson
260	Scoring Materials - CDE Review Final	5 days	Fri 11/11/16	Thu 11/17/16	CDE
261	Scoring Monitors Recruitment	25 days	Fri 7/1/16	Thu 8/4/16	Pearson
262	Scoring Monitors Training	3 days	Fri 8/5/16	Tue 8/9/16	Pearson
263	**Online Score Submission System**	**66 days**	**Fri 7/1/16**	**Fri 9/30/16**	
264	Baseline System Requirements	30 days	Fri 7/1/16	Thu 8/11/16	Pearson
265	System developed, tested, reviewed with CDE	30 days	Fri 8/12/16	Thu 9/22/16	Pearson
266	Online Score Submission System - CDE Final Review	5 days	Fri 9/23/16	Thu 9/29/16	CDE
267	Create and Generate Teacher User ID's and Passwords	1 day	Fri 9/30/16	Fri 9/30/16	Pearson
268	Online Score Submission System - GO LIVE	0 days	Fri 9/30/16	Fri 9/30/16	Pearson
269	Scoring Guidance Document review rounds	60 days	Mon 10/3/16	Fri 12/23/16	Pearson
270	Scoring Guidance Document - CDE review	5 days	Mon 12/26/16	Fri 12/30/16	CDE
271	Scoring Guidance - Available to Classroom Teachers	0 days	Fri 12/30/16	Fri 12/30/16	Pearson
272	**Scoring Processes - Spring 2017**	**261 days**	**Fri 7/1/16**	**Fri 6/30/17**	
273	Scoring Procedures review rounds	40 days	Fri 7/1/16	Thu 8/25/16	Pearson
274	Scoring Procedures - CDE Review Final	5 days	Fri 8/26/16	Thu 9/1/16	CDE
275	Scoring Materials review rounds	50 days	Fri 9/2/16	Thu 11/10/16	Pearson
276	Scoring Materials - CDE Review Final	5 days	Wed 4/26/17	Tue 5/2/17	CDE
277	Scoring Monitors Recruitment	25 days	Fri 7/1/16	Thu 8/4/16	Pearson
278	Scoring Monitors Training	3 days	Fri 8/5/16	Tue 8/9/16	Pearson
279	**Online Score Submission System**	**151 days**	**Fri 7/1/16**	**Fri 1/27/17**	
280	Baseline System Requirements	80 days	Fri 7/1/16	Thu 10/20/16	Pearson
281	System developed, tested, reviewed with CDE	65 days	Fri 10/21/16	Thu 1/19/17	Pearson

				Colorado Alternate Schedule - FY2017	
ID	Task Name	Duration	Start	Finish	Resource Names
282	Online Score Submission System - CDE Final Review	5 days	Fri 1/20/17	Thu 1/26/17	CDE
283	Create and Generate Teacher User ID's and Passwords	1 day	Fri 1/27/17	Fri 1/27/17	Pearson
284	Online Score Submission System - GO LIVE	0 days	Fri 7/1/16	Fri 7/1/16	Pearson
285	Scoring Guidance Document review rounds	60 days	Mon 4/3/17	Fri 6/23/17	Pearson
286	Scoring Guidance Document - CDE review	5 days	Mon 6/26/17	Fri 6/30/17	CDE
287	Scoring Guidance - Available to Classroom Teachers	0 days	Fri 6/30/17	Fri 6/30/17	Pearson
288	**Reporting of Data Files and Assessment Results**	**398 days**	**Fri 7/1/16**	**Tue 1/9/18**	
289	**Reporting Files - Specs**	**65 days**	**Fri 7/1/16**	**Thu 9/29/16**	
290	Reporting: Data File Layout review rounds	45 days	Fri 7/1/16	Thu 9/1/16	Pearson
291	Reporting: Score Report Shells review rounds	60 days	Fri 7/1/16	Thu 9/22/16	Pearson
292	Reporting: Individual Student Level File Layout - CDE Review Final	5 days	Fri 9/2/16	Thu 9/8/16	CDE
293	Reporting: Individual Student Level Report Shells – CDE Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
294	Reporting: State Level File Layouts – CDE Review Final	5 days	Fri 9/2/16	Thu 9/8/16	CDE
295	Reporting: District Level File Layouts – CDE Review Final	5 days	Fri 9/2/16	Thu 9/8/16	CDE
296	Reporting: District Level Report Shells – CDE Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
297	Reporting: School Level File Layouts – CDE Review Final	5 days	Fri 9/2/16	Thu 9/8/16	CDE
298	Reporting: School Level Report Shells – CDE Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
299	**Fall 2016 - Reports**	**352 days**	**Mon 9/5/16**	**Tue 1/9/18**	
300	Student Biographical Data Review Window	9 days	Tue 11/14/17	Fri 11/24/17	CO DISTRICTS
301	**Operational Reporting**	**16 days**	**Mon 12/18/17**	**Mon 1/8/18**	
302	Reporting: QC of Individual Student Level File – CDE Review	1 day	Mon 12/18/17	Mon 12/18/17	CDE
303	Reporting: QC of Individual Student Level File – CDE Verification	0 days	Mon 12/18/17	Mon 12/18/17	CDE
304	Reporting: Individual Student Level File Posted	0 days	Mon 12/18/17	Mon 12/18/17	Pearson
305	Reporting: Individual Student Report Bellwethers	2 days	Fri 12/22/17	Mon 12/25/17	CDE
306	Reporting: Individual Student Level File Electronic Reports Posted	0 days	Thu 12/28/17	Thu 12/28/17	Pearson
307	Reporting: Individual Student Level Hard Copy Reports in District	0 days	Mon 1/8/18	Mon 1/8/18	Pearson
308	**State Level Files**	**8 days**	**Tue 12/19/17**	**Thu 12/28/17**	
309	Pearson updates scoring system and produces/verifies State Level File	6 days	Tue 12/19/17	Tue 12/26/17	Pearson
310	Reporting: QC of State Level File(s) – CDE Review	2 days	Wed 12/27/17	Thu 12/28/17	CDE
311	Reporting: QC of State Level File(s) – CDE Verification	0 days	Thu 12/28/17	Thu 12/28/17	CDE
312	Reporting: State Level File(s) Posted	0 days	Thu 12/28/17	Thu 12/28/17	Pearson
313	**District Level Files**	**10 days**	**Wed 12/27/17**	**Tue 1/9/18**	
314	Reporting: QC of District Level File(s) – CDE Review	2 days	Wed 12/27/17	Thu 12/28/17	CDE
315	Reporting: QC of District Level File(s) – CDE Verification	0 days	Thu 12/28/17	Thu 12/28/17	CDE
316	Reporting: District Level File(s) Posted	0 days	Thu 12/28/17	Thu 12/28/17	Pearson
317	Reporting: District Reports Bellwethers	2 days	Wed 1/3/18	Thu 1/4/18	CDE
318	Reporting: District Electronic Reports Posted	0 days	Tue 1/9/18	Tue 1/9/18	Pearson
319	**School Level Files**	**10 days**	**Wed 12/27/17**	**Tue 1/9/18**	
320	Reporting: QC of School Level File(s) – CDE Review	2 days	Wed 12/27/17	Thu 12/28/17	CDE
321	Reporting: QC of School Level File(s) – CDE Verification	0 days	Thu 12/28/17	Thu 12/28/17	CDE
322	Reporting: School Level File(s) Posted	0 days	Thu 12/28/17	Thu 12/28/17	Pearson
323	Reporting: School Reports Bellwethers	2 days	Wed 1/3/18	Thu 1/4/18	CDE
324	Reporting: School Electronic Reports Posted	0 days	Tue 1/9/18	Tue 1/9/18	Pearson
325	**Interpretive Guide**	**85 days**	**Mon 9/5/16**	**Fri 12/30/16**	
326	Interpretive Guide review rounds	80 days	Mon 9/5/16	Fri 12/23/16	Pearson
327	Assessment Interpretive Guide – Review Final	5 days	Mon 12/26/16	Fri 12/30/16	CDE
328	Assessment Interpretive Guide Posted	0 days	Fri 12/30/16	Fri 12/30/16	Pearson

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
329	**Spring 2017 - Reports**	**213 days**	**Mon 9/5/16**	**Wed 6/28/17**	
330	Student Biographical Data Review Window	10 days	Thu 5/18/17	Wed 5/31/17	CO DISTRICTS
331	**Operational Reporting**	**16 days**	**Wed 6/7/17**	**Wed 6/28/17**	
332	Reporting: QC of Individual Student Level File – CDE Review	1 day	Wed 6/7/17	Wed 6/7/17	CDE
333	Reporting: QC of Individual Student Level File – CDE Verification	0 days	Wed 6/7/17	Wed 6/7/17	CDE
334	Reporting: Individual Student Level File Posted	0 days	Wed 6/7/17	Wed 6/7/17	Pearson
335	Reporting: Individual Student Report Bellwethers	2 days	Tue 6/13/17	Wed 6/14/17	CDE
336	Reporting: Individual Student Level File Electronic Reports Posted	0 days	Mon 6/19/17	Mon 6/19/17	Pearson
337	Reporting: Individual Student Level Hard Copy Reports in District	0 days	Wed 6/28/17	Wed 6/28/17	Pearson
338	**State Level Files**	**8 days**	**Wed 5/31/17**	**Fri 6/9/17**	
339	Pearson updates scoring system and produces/verifies State Level File	6 days	Wed 5/31/17	Wed 6/7/17	Pearson
340	Reporting: QC of State Level File(s) – CDE Review	2 days	Thu 6/8/17	Fri 6/9/17	CDE
341	Reporting: QC of State Level File(s) – CDE Verification	0 days	Fri 6/9/17	Fri 6/9/17	CDE
342	Reporting: State Level File(s) Posted	0 days	Fri 6/9/17	Fri 6/9/17	Pearson
343	**District Level Files**	**10 days**	**Thu 6/8/17**	**Wed 6/21/17**	
344	Reporting: QC of District Level File(s) – CDE Review	2 days	Thu 6/8/17	Fri 6/9/17	CDE
345	Reporting: QC of District Level File(s) – CDE Verification	0 days	Fri 6/9/17	Fri 6/9/17	CDE
346	Reporting: District Level File(s) Posted	0 days	Fri 6/9/17	Fri 6/9/17	Pearson
347	Reporting: District Reports Bellwethers	2 days	Thu 6/15/17	Fri 6/16/17	CDE
348	Reporting: District Electronic Reports Posted	0 days	Wed 6/21/17	Wed 6/21/17	Pearson
349	**School Level Files**	**10 days**	**Thu 6/8/17**	**Wed 6/21/17**	
350	Reporting: QC of School Level File(s) – CDE Review	2 days	Thu 6/8/17	Fri 6/9/17	CDE
351	Reporting: QC of School Level File(s) – CDE Verification	0 days	Fri 6/9/17	Fri 6/9/17	CDE
352	Reporting: School Level File(s) Posted	0 days	Fri 6/9/17	Fri 6/9/17	Pearson
353	Reporting: School Reports Bellwethers	2 days	Thu 6/15/17	Fri 6/16/17	CDE
354	Reporting: School Electronic Reports Posted	0 days	Wed 6/21/17	Wed 6/21/17	Pearson
355	**Interpretive Guide**	**85 days**	**Mon 9/5/16**	**Fri 12/30/16**	
356	Interpretive Guide review rounds	80 days	Mon 9/5/16	Fri 12/23/16	Pearson
357	Assessment Interpretive Guide – Review Final	5 days	Mon 12/26/16	Fri 12/30/16	CDE
358	Assessment Interpretive Guide Posted	0 days	Fri 12/30/16	Fri 12/30/16	Pearson
359	**Psychometric, Research, and Technical Activities**	**403 days**	**Tue 9/6/16**	**Thu 3/22/18**	
360	**Fall Field Test and Operational Analysis**	**79 days**	**Mon 12/4/17**	**Thu 3/22/18**	
361	Psychometric Analysis of Field Test	30 days	Fri 2/9/18	Thu 3/22/18	Pearson
362	Operational Analysis	8 days	Mon 12/4/17	Wed 12/13/17	Pearson
363	CDE Review and Approval of Equating Results	1 day	Thu 12/14/17	Thu 12/14/17	CDE
364	**Spring Field Test and Operational Analysis**	**30 days**	**Thu 5/18/17**	**Wed 6/28/17**	
365	Psychometric Analysis of Field Test	30 days	Thu 5/18/17	Wed 6/28/17	Pearson
366	Operational Analysis	8 days	Thu 5/18/17	Mon 5/29/17	Pearson
367	CDE Review and Approval of Equating Results	1 day	Tue 5/30/17	Tue 5/30/17	CDE
368	**TAC Meetings**	**112 days**	**Tue 9/6/16**	**Wed 2/8/17**	
369	TAC Meeting 1	2 days	Tue 9/6/16	Wed 9/7/16	Pearson
370	TAC Meeting 2	2 days	Tue 12/6/16	Wed 12/7/16	Pearson
371	TAC Meeting 3	2 days	Tue 2/7/17	Wed 2/8/17	Pearson
372	**Technical Reports**	**84 days**	**Tue 8/15/17**	**Fri 12/8/17**	
373	Technical Report – Final version to CDE	0 days	Tue 8/15/17	Tue 8/15/17	Pearson
374	Irregularity and Data Forensic Report	10 days	Mon 11/27/17	Fri 12/8/17	Pearson
375	**Training and Support**	**176 days**	**Fri 7/1/16**	**Fri 3/3/17**	

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
376	Understanding Assessment Results Training Materials review rounds	20 days	Fri 7/1/16	Thu 7/28/16	Pearson
377	Understanding Assessment Results Training Material - CDE Final Review	5 days	Fri 7/29/16	Thu 8/4/16	CDE
378	Understanding Assessment Results Training	5 days	Mon 8/22/16	Fri 8/26/16	Pearson
379	Technology Director Training Material review rounds	60 days	Fri 7/1/16	Thu 9/22/16	Pearson
380	Technology Director Training Material CDE Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
381	Conduct Technology Director Training	5 days	Mon 2/6/17	Fri 2/10/17	Pearson
382	Assessment Administration Training Material review rounds	30 days	Mon 1/2/17	Fri 2/10/17	Pearson
383	Assessment Administration Training Material CDE Review Final	5 days	Mon 2/13/17	Fri 2/17/17	CDE
384	Conduct Assessment Administration Training	5 days	Mon 2/27/17	Fri 3/3/17	Pearson
385	Online Training Support Materials	0 days	Mon 2/6/17	Mon 2/6/17	Pearson
386	**Customer Service**	**21 days**	**Thu 6/30/16**	**Thu 7/28/16**	
387	Customer feedback survey	0 days	Thu 6/30/16	Thu 6/30/16	Pearson
388	Establish DAC Website	20 days	Fri 7/1/16	Thu 7/28/16	Pearson
389	**"Tail" Activities**	**329 days**	**Wed 6/1/16**	**Tue 9/5/17**	
390	**Program Management**	**23 days**	**Thu 8/3/17**	**Tue 9/5/17**	
391	Project Meeting - Close out	2 days	Tue 8/15/17	Wed 8/16/17	Pearson
392	Transition Plan - End of Contract	0 days	Thu 8/31/17	Thu 8/31/17	Pearson
393	**Monthly Reports**	**23 days**	**Thu 8/3/17**	**Tue 9/5/17**	
394	Jul	0 days	Thu 8/3/17	Thu 8/3/17	Pearson
395	Aug	0 days	Tue 9/5/17	Tue 9/5/17	Pearson
396	**Assessment Development**	**327 days**	**Wed 6/1/16**	**Thu 8/31/17**	
397	**Content and Bias Review - (Spring 2018 Field Test)**	**54 days**	**Mon 6/19/17**	**Thu 8/31/17**	
398	Item Review – CDE Review (newly written items)	5 days	Mon 7/17/17	Fri 7/21/17	Pearson
399	Recruit Content Review Participants	20 days	Mon 6/19/17	Fri 7/14/17	CDE
400	Create materials for Content and Bias/sensitivity Reviews	11 days	Fri 6/30/17	Fri 7/14/17	Pearson
401	Content and Bias/Sensitivity Review Materials – CDE Review	3 days	Mon 7/17/17	Wed 7/19/17	Pearson
402	Edit materials after CDE review	3 days	Thu 7/20/17	Mon 7/24/17	CDE
403	Content and Bias Review Meeting	2 days	Tue 7/25/17	Wed 7/26/17	Pearson
404	Implement edits suggested by committee	25 days	Fri 7/28/17	Thu 8/31/17	Pearson
405	Send final results of Content and Bias Sensitivity Review meeting	0 days	Thu 8/31/17	Thu 8/31/17	CDE
406	**Data Review (for Spring 2018 Operational)**	**300 days**	**Wed 6/1/16**	**Tue 7/25/17**	**Pearson**
407	Recruit Data Review Participants	25 days	Wed 6/1/16	Tue 7/5/16	Pearson
408	Print Data Review Meeting Materials	12 days	Tue 6/13/17	Wed 6/28/17	Pearson
409	Produce Data Review Materials – CDE Review	5 days	Thu 6/29/17	Wed 7/5/17	Pearson
410	Edit materials after CDE review	3 days	Thu 7/6/17	Mon 7/10/17	Pearson
411	Conduct Data Review meeting	1 day	Tue 7/11/17	Tue 7/11/17	Pearson
412	Provide final results of Data Review Meetings	10 days	Wed 7/12/17	Tue 7/25/17	Pearson

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
0	**CO Alternate - FY2018**	**1113 days**	**Sat 12/14/13**	**Wed 3/21/18**	
1	**START**	**1113 days**	**Sat 12/14/13**	**Wed 3/21/18**	
2	**General**	**5 days**	**Mon 7/3/17**	**Fri 7/7/17**	
3	Security Plan updated and rebaselined	5 days	Mon 7/3/17	Fri 7/7/17	Pearson
4	**Program Management**	**268 days**	**Fri 1/6/17**	**Tue 1/16/18**	
5	**Project Schedule**	**9 days**	**Mon 7/3/17**	**Thu 7/13/17**	
6	Draft Project Schedule Created	4 days	Mon 7/3/17	Thu 7/6/17	Pearson/ETS
7	Project Schedule - CDE Review	3 days	Fri 7/7/17	Tue 7/11/17	CDE
8	Project Schedule - CDE and Pearson Joint Review	1 day	Wed 7/12/17	Wed 7/12/17	Pearson/ETS/CDE
9	Project Schedule Updated and Baselined	1 day	Thu 7/13/17	Thu 7/13/17	Pearson
10	**Project Meetings**	**142 days**	**Mon 7/3/17**	**Tue 1/16/18**	
11	**Project Meeting 1**	**9 days**	**Mon 7/3/17**	**Thu 7/13/17**	
12	Agenda Drafted and Delivered to CDE	2 days	Mon 7/3/17	Tue 7/4/17	Pearson
13	Meeting held (Denver, CO)	2 days	Wed 7/5/17	Thu 7/6/17	
14	Meeting Minutes Distributed	5 days	Fri 7/7/17	Thu 7/13/17	Pearson
15	**Project Meeting 2**	**9 days**	**Fri 9/1/17**	**Wed 9/13/17**	
16	Agenda Drafted and Delivered to CDE	2 days	Fri 9/1/17	Mon 9/4/17	Pearson
17	Meeting held (Denver, CO)	2 days	Tue 9/5/17	Wed 9/6/17	
18	Meeting Minutes Distributed	5 days	Thu 9/7/17	Wed 9/13/17	Pearson
19	**Project Meeting 3 - In person**	**9 days**	**Fri 11/3/17**	**Wed 11/15/17**	
20	Agenda Drafted and Delivered to CDE	2 days	Fri 11/3/17	Mon 11/6/17	Pearson
21	Meeting held (San Antonio, TX)	2 days	Tue 11/7/17	Wed 11/8/17	
22	Meeting Minutes Distributed	5 days	Thu 11/9/17	Wed 11/15/17	Pearson
23	**Project Meeting 4**	**9 days**	**Thu 1/4/18**	**Tue 1/16/18**	
24	Agenda Drafted and Delivered to CDE	2 days	Thu 1/4/18	Fri 1/5/18	Pearson
25	Meeting held (Denver, CO)	2 days	Mon 1/8/18	Tue 1/9/18	
26	Meeting Minutes Distributed	5 days	Wed 1/10/18	Tue 1/16/18	Pearson
27	**Monthy Reports**	**236 days**	**Fri 1/6/17**	**Sun 12/3/17**	
28	Jul	0 days	Sat 8/5/17	Sat 8/5/17	Pearson
29	Aug	0 days	Sun 9/3/17	Sun 9/3/17	Pearson
30	Sep	0 days	Tue 10/3/17	Tue 10/3/17	Pearson
31	Oct	0 days	Sun 11/5/17	Sun 11/5/17	Pearson
32	Nov	0 days	Sun 12/3/17	Sun 12/3/17	Pearson
33	Dec	0 days	Fri 1/6/17	Fri 1/6/17	Pearson
34	**DAC**	**2 days**	**Mon 10/23/17**	**Tue 10/24/17**	
35	DAC Management 1	2 days	Mon 10/23/17	Tue 10/24/17	Pearson
36	**Invoices**	**65 days**	**Sat 9/30/17**	**Sun 12/31/17**	
37	Invoice Q1	0 days	Sat 9/30/17	Sat 9/30/17	Pearson
38	Invoice Q2	0 days	Sun 12/31/17	Sun 12/31/17	Pearson
39	**Assessment Development**	**161 days**	**Fri 6/2/17**	**Fri 1/12/18**	
40	**Style Guide**	**30 days**	**Sat 7/1/17**	**Fri 8/11/17**	
41	Colorado Style Guide - Draft	30 days	Mon 7/3/17	Fri 8/11/17	Content
42	Colorado Style Guide - Final for year	0 days	Sat 7/1/17	Sat 7/1/17	Content
43	**Content and Bias Review - Science, Social Studies**	**62 days**	**Mon 7/3/17**	**Tue 9/26/17**	
44	Item Review – CDE Review (newly written items)	5 days	Mon 7/3/17	Fri 7/7/17	CDE
45	Recruit Content Review Participants	10 days	Mon 7/3/17	Fri 7/14/17	Pearson
46	Content Creates training materials for Content and PLD Meetings	10 days	Mon 7/3/17	Fri 7/14/17	Content

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
47	Content and PLD Meeting training Materials – CDE Review	5 days	Mon 7/17/17	Fri 7/21/17	CDE
48	Edit and ship materials after CDE review	13 days	Mon 7/24/17	Wed 8/9/17	Content
49	Content and Bias Meeting	3 days	Thu 8/10/17	Mon 8/14/17	Content
50	Content implements edits suggested by committee	30 days	Tue 8/15/17	Mon 9/25/17	Content
51	Content sends final results of Content and Bias Sensitivity Review meeting	1 day	Tue 9/26/17	Tue 9/26/17	Content
52	**Data Review**	**161 days**	**Fri 6/2/17**	**Fri 1/12/18**	
53	**Elementary/Middle (Virtual)**	**52 days**	**Fri 6/2/17**	**Mon 8/14/17**	
54	Recruit Data Review Participants	25 days	Fri 6/2/17	Thu 7/6/17	Pearson
55	Content Creates Data Review Training Materials	5 days	Mon 7/3/17	Fri 7/7/17	Content
56	Produce Data Review Training Materials – CDE Review	4 days	Mon 7/10/17	Thu 7/13/17	CDE
57	Edit and ship materials after CDE review	10 days	Fri 7/14/17	Thu 7/27/17	Content
58	Conduct Data Review meeting	1 day	Fri 7/28/17	Fri 7/28/17	Content
59	Content implements edits suggested by committee	10 days	Mon 7/31/17	Fri 8/11/17	Content
60	Content provides final results of Data Review Meetings	1 day	Mon 8/14/17	Mon 8/14/17	Content
61	**High School (Virtual)**	**31 days**	**Fri 12/1/17**	**Fri 1/12/18**	
62	Recruit Data Review Participants	25 days	Fri 12/1/17	Thu 1/4/18	
63	Content Creates Data Review Training Materials	5 days	Fri 12/1/17	Thu 12/7/17	Pearson
64	Produce Data Review Training Materials – CDE Review	4 days	Fri 12/8/17	Wed 12/13/17	CDE
65	Edit and ship materials after CDE review	10 days	Thu 12/14/17	Wed 12/27/17	Content
66	Conduct Data Review meeting	1 day	Thu 12/28/17	Thu 12/28/17	Content
67	Content implements edits suggested by committee	10 days	Fri 12/29/17	Thu 1/11/18	Content
68	Content provides final results of Data Review Meetings	1 day	Fri 1/12/18	Fri 1/12/18	Content
69	**Form Development**	**25 days**	**Mon 7/3/17**	**Fri 8/4/17**	
70	**Fall 2017 - High School**	**25 days**	**Mon 7/3/17**	**Fri 8/4/17**	
71	**Test/Ancillary Material - Development**	**25 days**	**Mon 7/3/17**	**Fri 8/4/17**	
72	District and School Assessment Coordinator review rounds	20 days	Mon 7/3/17	Fri 7/28/17	Pearson
73	Document Development: District and School Assessment Coordinators Manual – CDE Review Final	5 days	Mon 7/31/17	Fri 8/4/17	CDE
74	Ancillary Materials (Manipulatives) review rounds	20 days	Mon 7/3/17	Fri 7/28/17	Pearson
75	Document Development: Ancillary Materials – CDE Review Final	5 days	Mon 7/31/17	Fri 8/4/17	CDE
76	Field Testing Plan	20 days	Mon 7/3/17	Fri 7/28/17	Pearson
77	**Assessment Administration**	**119 days**	**Sat 7/1/17**	**Thu 12/14/17**	
78	**Fall 2017 - High School**	**119 days**	**Sat 7/1/17**	**Thu 12/14/17**	
79	**Orders for Materials**	**45 days**	**Fri 9/1/17**	**Thu 11/2/17**	
80	Materials Ordering System Operational	0 days	Fri 9/1/17	Fri 9/1/17	Pearson
81	Materials Ordering Window (SDU's)	10 days	Fri 9/1/17	Thu 9/14/17	Pearson
82	Online Rosters Generated	5 days	Fri 9/15/17	Thu 9/21/17	Pearson
83	Additional Materials Ordering Window	30 days	Fri 9/22/17	Thu 11/2/17	Pearson
84	**Test/Ancillary Material - Production**	**25 days**	**Mon 7/3/17**	**Fri 8/4/17**	
85	Test Book|Content Produced	25 days	Mon 7/3/17	Fri 8/4/17	Pearson
86	Ancillaries Produced	15 days	Mon 7/3/17	Fri 7/21/17	Pearson
87	**Packaging and Delivery**	**72 days**	**Sat 7/1/17**	**Tue 10/10/17**	
88	Colorado Districts in Shipping System	0 days	Sat 7/1/17	Sat 7/1/17	Pearson
89	Packaging Specifications Finalized	0 days	Sat 7/1/17	Sat 7/1/17	Pearson
90	Non-secure Materials Packaged	10 days	Fri 9/22/17	Thu 10/5/17	Pearson
91	Non-secure Materials Shipped	3 days	Fri 10/6/17	Tue 10/10/17	Pearson
92	Non-secure Materials in District	0 days	Tue 10/10/17	Tue 10/10/17	Pearson
93	Secure Materials Packaged	10 days	Fri 9/22/17	Thu 10/5/17	Pearson

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
94	Secure Materials Shipped	3 days	Fri 10/6/17	Tue 10/10/17	Pearson
95	Secure Materials in District	0 days	Tue 10/10/17	Tue 10/10/17	Pearson
96	**Test Administration**	**15 days**	**Mon 10/23/17**	**Fri 11/10/17**	
97	Operational Test Administration Window and Score Entry Window- High School Science, Social Studies	15 days	Mon 10/23/17	Fri 11/10/17	
98	**Material Return and Verification**	**20 days**	**Thu 11/16/17**	**Thu 12/14/17**	
99	Not To Be Scored Materials Return Shipment	0 days	Thu 11/16/17	Thu 11/16/17	Pearson
100	Non-scored Materials Destruction	0 days	Mon 11/20/17	Mon 11/20/17	Pearson
101	Secure Materials Verification – Initial Report	0 days	Thu 11/30/17	Thu 11/30/17	Pearson
102	Secure Materials Verification – Weekly Report	0 days	Thu 12/7/17	Thu 12/7/17	Pearson
103	Secure Materials Verification – Final Report	0 days	Thu 12/14/17	Thu 12/14/17	Pearson
104	**Test Monitoring**	**95 days**	**Sat 7/1/17**	**Fri 11/10/17**	
105	Test Monitoring Protocol review rounds	60 days	Mon 7/3/17	Fri 9/22/17	Pearson
106	Test Monitoring Protocol – CDE Review Final	5 days	Mon 9/25/17	Fri 9/29/17	CDE
107	Test Monitoring Sites Selected	0 days	Sat 7/1/17	Sat 7/1/17	Pearson
108	Test Monitoring Sites Notified – TBD if needed	0 days	Sat 7/1/17	Sat 7/1/17	Pearson
109	Test Monitoring	15 days	Mon 10/23/17	Fri 11/10/17	Pearson
110	**Scanning and Scoring**	**25 days**	**Mon 7/3/17**	**Fri 8/4/17**	
111	**Fall 2016 - High School**	**25 days**	**Mon 7/3/17**	**Fri 8/4/17**	
112	**Scoring Processes**	**25 days**	**Mon 7/3/17**	**Fri 8/4/17**	
113	Specifications review rounds	20 days	Mon 7/3/17	Fri 7/28/17	Pearson
114	Specifications – CDE Review Final	5 days	Mon 7/31/17	Fri 8/4/17	CDE
115	**Reporting of Data Files and Assessment Results**	**1053 days**	**Sat 12/14/13**	**Wed 12/27/17**	
116	**Reporting Files - Specs**	**65 days**	**Mon 7/3/17**	**Fri 9/29/17**	
117	Reporting: Data File Layout review rounds	45 days	Mon 7/3/17	Fri 9/1/17	Pearson
118	Reporting: Score Report Shells review rounds	60 days	Mon 7/3/17	Fri 9/22/17	Pearson
119	Reporting: Individual Student Level File Layout - CDE Review Final	5 days	Mon 9/4/17	Fri 9/8/17	CDE
120	Reporting: Individual Student Level Report Shells – CDE Review Final	5 days	Mon 9/25/17	Fri 9/29/17	CDE
121	Reporting: State Level File Layouts – CDE Review Final	5 days	Mon 9/4/17	Fri 9/8/17	CDE
122	Reporting: District Level File Layouts – CDE Review Final	5 days	Mon 9/4/17	Fri 9/8/17	CDE
123	Reporting: District Level Report Shells – CDE Review Final	5 days	Mon 9/25/17	Fri 9/29/17	CDE
124	Reporting: School Level File Layouts – CDE Review Final	5 days	Mon 9/4/17	Fri 9/8/17	CDE
125	Reporting: School Level Report Shells – CDE Review Final	5 days	Mon 9/25/17	Fri 9/29/17	CDE
126	**Fall 2016 - High School**	**1053 days**	**Sat 12/14/13**	**Wed 12/27/17**	
127	**Reports**	**23 days**	**Mon 11/27/17**	**Wed 12/27/17**	
128	Student Biographical Data Review Window	10 days	Mon 11/27/17	Fri 12/8/17	
129	**Operational Reporting - Science, Social Studies**	**16 days**	**Wed 12/6/17**	**Wed 12/27/17**	
130	Reporting: QC of Individual Student Level File – CDE Review	1 day	Wed 12/6/17	Wed 12/6/17	CDE
131	Reporting: QC of Individual Student Level File – CDE Verification	0 days	Wed 12/6/17	Wed 12/6/17	CDE
132	Reporting: Individual Student Level File Posted	0 days	Wed 12/6/17	Wed 12/6/17	Pearson
133	Reporting: Individual Student Report Bellwethers	2 days	Tue 12/12/17	Wed 12/13/17	CDE
134	Reporting: Individual Student Level File Electronic Reports Posted	0 days	Mon 12/18/17	Mon 12/18/17	Pearson
135	Reporting: Individual Student Level Hard Copy Reports in District	0 days	Wed 12/27/17	Wed 12/27/17	Pearson
136	**State Level Files**	**9 days**	**Wed 12/6/17**	**Mon 12/18/17**	
137	Pearson updates scoring system and produces/verifies State Level File	6 days	Wed 12/6/17	Wed 12/13/17	Pearson
138	Reporting: QC of State Level File(s) – CDE Review	2 days	Fri 12/15/17	Mon 12/18/17	CDE
139	Reporting: QC of State Level File(s) – CDE Verification	0 days	Mon 12/18/17	Mon 12/18/17	CDE
140	Reporting: State Level File(s) Posted	0 days	Mon 12/18/17	Mon 12/18/17	Pearson

EXHIBIT B

ID	Task Name	Duration	Start	Finish	Resource Names
141	**District Level Files**	**10 days**	**Sat 12/14/13**	**Fri 12/27/13**	
142	Reporting: QC of District Level File(s) – CDE Review	2 days	Sat 12/14/13	Tue 12/17/13	CDE
143	Reporting: QC of District Level File(s) – CDE Verification	0 days	Tue 12/17/13	Tue 12/17/13	CDE
144	Reporting: District Level File(s) Posted	0 days	Tue 12/17/13	Tue 12/17/13	Pearson
145	Reporting: District Reports Bellwethers	2 days	Mon 12/23/13	Tue 12/24/13	CDE
146	Reporting: District Electronic Reports Posted	0 days	Fri 12/27/13	Fri 12/27/13	Pearson
147	**School Level Files**	**10 days**	**Thu 12/14/17**	**Wed 12/27/17**	
148	Reporting: QC of School Level File(s) – CDE Review	2 days	Thu 12/14/17	Fri 12/15/17	CDE
149	Reporting: QC of School Level File(s) – CDE Verification	0 days	Fri 12/15/17	Fri 12/15/17	CDE
150	Reporting: School Level File(s) Posted	0 days	Fri 12/15/17	Fri 12/15/17	Pearson
151	Reporting: School Reports Bellwethers	2 days	Thu 12/21/17	Fri 12/22/17	CDE
152	Reporting: School Electronic Reports Posted	0 days	Wed 12/27/17	Wed 12/27/17	Pearson
153	**Interpretive Guide**	**65 days**	**Mon 7/3/17**	**Fri 9/29/17**	
154	Interpretive Guide review rounds	60 days	Mon 7/3/17	Fri 9/22/17	Pearson
155	Assessment Interpretive Guide – Review Final	5 days	Mon 9/25/17	Fri 9/29/17	CDE
156	Assessment Interpretive Guide Posted	0 days	Fri 9/29/17	Fri 9/29/17	Pearson
157	**Psychometric, Research, and Technical Activities**	**158 days**	**Mon 8/14/17**	**Wed 3/21/18**	
158	**Fall High School Field Test and Operational Analysis**	**86 days**	**Wed 11/22/17**	**Wed 3/21/18**	
159	Psychometric Analysis of Field Test (2/8/18)	30 days	Thu 2/8/18	Wed 3/21/18	Pearson
160	Operational Analysis	9 days	Wed 11/22/17	Mon 12/4/17	Pearson
161	CDE Review and Approval of Equating Results	1 day	Tue 12/5/17	Tue 12/5/17	CDE
162	**TAC Meetings**	**67 days**	**Mon 9/4/17**	**Tue 12/5/17**	
163	TAC Meeting 1	2 days	Mon 9/4/17	Tue 9/5/17	Pearson
164	TAC Meeting 2	2 days	Mon 12/4/17	Tue 12/5/17	Pearson
165	**Technical Reports**	**91 days**	**Mon 8/14/17**	**Mon 12/18/17**	
166	Technical Report – Final version to CDE	0 days	Mon 8/14/17	Mon 8/14/17	Pearson
167	Irregularity and Data Forensic Report	10 days	Tue 12/5/17	Mon 12/18/17	Pearson
168	**Training and Support**	**65 days**	**Mon 7/3/17**	**Fri 9/29/17**	
169	Understanding Assessment Results Training Materials review rounds	20 days	Mon 7/3/17	Fri 7/28/17	Pearson
170	Understanding Assessment Results Training Material - CDE Final Review	5 days	Mon 7/31/17	Fri 8/4/17	CDE
171	Understanding Assessment Results Training	5 days	Mon 8/7/17	Fri 8/11/17	Pearson
172	Technology Director Training Material review rounds	60 days	Mon 7/3/17	Fri 9/22/17	Pearson
173	Technology Director Training Material CDE Review Final	5 days	Mon 9/25/17	Fri 9/29/17	CDE
174	**Customer Service**	**129 days**	**Mon 7/3/17**	**Fri 12/29/17**	
175	Customer feedback survey	0 days	Fri 12/29/17	Fri 12/29/17	Pearson
176	Establish DAC Website	20 days	Mon 7/3/17	Fri 7/28/17	Pearson

Exhibit C: Liquidated Damages Dates

Schedule A: Summative Assessment Deliverables Subject to Liquidated Damages

Deliverable	Deliverable Date	Dollar Amount
Non-secure Materials In District	04/14/2013 03/31/2014	$ 250 per day
Secure Materials In District	03/31/2014	$1,000 per day
Pearson Online Testing Training Center Available for District Use	02/01/2013 02/03/2014	$500 per day
Online Test Delivery System Demonstration	02/28/2013 02/17/2014	$250 per day
Standard Setting Results	06/23/2014	$1,000 per day
Forms Available for Online Test Delivery System/Proctor Caching	04/24/2013 03/31/2014	$1,000 per day
Liquidated Damages will be assessed if TestNav is down and inaccessible to students between the hours of 6 a.m. and 6 p.m. MST, Monday – Friday during the established testing window(s), excluding planned and agreed upon outages and issues caused on the user's end.	Daily 4/14/2014 through 5/2/201	$1,000 per hour up to $10,000 per day
Reporting: Individual Student Level File Posted	07/29/2014	$5,000 per day
Reporting: Individual Student Level File Electronic Reports Posted	08/05/2014	$5,000 per day
Reporting: Individual Student Level Hard Copy Reports in District	08/20/2014	$1,000 per day
Reporting: State Level File(s) Posted	07/29/2014	$1,000 per day
Reporting: District Level File(s) Posted	07/29/2014	$1,000 per day
Reporting: District Electronic Reports Posted	08/08/2014	$1,000 per day
Reporting: School Level File(s) Posted	07/29/2014	$1,000 per day
Reporting: School Electronic Reports Posted	08/08/2014	$1,000 per day
Assessment Interpretive Guide Posted	08/05/2014	$1,000 per day
Technical Report – Final version to CDE	08/15/2014	$250 per day

Exhibit C: Liquidated Damages Dates

Schedule B: Alternate Assessment Deliverables Subject to Liquidated Damages

Deliverable	Deliverable Date	Dollar Amount
Non-secure Materials Available to Districts	04/08/2013 03/31/2014	$100 per day
Secure Materials In District: Science and Social Studies Field Test Science and Social Studies Operational	04/08/2013 03/31/2014	$1,000 per day
Pearson Online Scorer Entry Training Center Available for District Use	02/01/2013 02/03/2014	$500 per day
Standard Setting Results	07/01/2014	$1,000 per day
Online scoring system ready for CDE review	03/22/2013 03/24/2014	$100 per day
Reporting: Individual Student Level File Posted	07/29/2014	$5,000 per day
Reporting: Individual Student Level File Electronic Reports Posted	08/05/2014	$5,000 per day
Reporting: Individual Student Level Hard Copy Reports in District	08/20/2014	$1,000 per day
Reporting: State Level File(s) Posted	07/29/2014	$1,000 per day
Reporting: District Level File(s) Posted	07/29/2014	$1,000 per day
Reporting: District Electronic Reports Posted	08/08/2014	$1,000 per day
Reporting: School Level File(s) Posted	07/29/2014	$1,000 per day
Reporting: School Electronic Reports Posted	08/08/2014	$1,000 per day
Assessment Interpretive Guide Posted	08/05/2014	$1,000 per day
Technical Report – Final version to CDE	08/15/2014	$250 per day

Document Title	Document Description	# Pgs	# of Fms	Order Qty
Scannable Materials		300	4	2,800
SOCIAL STUDIES CONSUMABLE TEST BOOKLET, PAPER ACCOMMODATION, GR 04	scannable book, .166 (6x6 layout), 8.5x11, mark reflex, 4 color, 60# offset, saddle-stitched, corner cut, matching lithocode	70	1	700
SOCIAL STUDIES CONSUMABLE TEST BOOKLET, PAPER ACCOMMODATION, GR 07	scannable book, .166 (6x6 layout), 8.5x11, mark reflex, 4 color, 60# offset, saddle-stitched, corner cut, matching lithocode	70	1	700
SCIENCE CONSUMABLE TEST BOOKLET, PAPER ACCOMMODATION, GR 05	scannable book, .166 (6x6 layout), 8.5x11, mark reflex, 4 color, 60# offset, saddle-stitched, corner cut, matching lithocode	80	1	700
SCIENCE CONSUMABLE TEST BOOKLET, PAPER ACCOMMODATION, GR 08	scannable book, .166 (6x6 layout), 8.5x11, mark reflex, 4 color, 60# offset, saddle-stitched, corner cut, matching lithocode	80	1	700
Scannable Headers		2	1	4,900
COLORADO SCHOOL/GRADE/SUBJECT HEADER	scannable sheet, .166 (6x6 layout), 8.5x11, mark reflex, black plus one additional color, 60# offset, cut sheet, lithocode front/back	2	1	4,900
Non-scannable Test Books/Scripts		24	2	1,400
SOCIAL STUDIES SOURCE BOOK, PAPER ACCOMMODATION, GR 04	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints 4 color	12	1	700
SOCIAL STUDIES SOURCE BOOK, PAPER ACCOMMODATION, GR 07	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints 4 color	12	1	700
Large Print		320	4	140
SOCIAL STUDIES LARGE PRINT TEST BOOKLET, GR 04	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints one GRAYSCALE plus black on cover, GRAYSCALE plus black all interior	80	1	35
SOCIAL STUDIES LARGE PRINT TEST BOOKLET, GR 07	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints one GRAYSCALE plus black on cover, GRAYSCALE plus black all interior	80	1	35
SCIENCE LARGE PRINT TEST BOOKLET, GR 05	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints one GRAYSCALE plus black on cover, GRAYSCALE plus black all interior	80	1	35
SCIENCE LARGE PRINT TEST BOOKLET, GR 08	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints one GRAYSCALE plus black on cover, GRAYSCALE plus black all interior	80	1	35
SOCIAL STUDIES LARGE PRINT SOURCE BOOK, GR 04	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints one GRAYSCALE plus black on cover, GRAYSCALE plus black all interior	12	1	35
SOCIAL STUDIES LARGE PRINT SOURCE BOOK, GR 07	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints one GRAYSCALE plus black on cover, GRAYSCALE plus black all interior	12	1	35
Braille		640	4	24
SOCIAL STUDIES TEST BOOK, BRAILLE, GR 04	Contracted Braille: 11-1/2x11" Manila 100# stock	160	1	6
SOCIAL STUDIES TEST BOOK, BRAILLE, GR 07	Contracted Braille: 11-1/2x11" Manila 100# stock	160	1	6
SCIENCE TEST BOOK, BRAILLE, GR 05	Contracted Braille: 11-1/2x11" Manila 100# stock	160	1	6
SCIENCE TEST BOOK, BRAILLE, GR 08	Contracted Braille: 11-1/2x11" Manila 100# stock	160	1	6
SOCIAL STUDIES TEST BOOK, BRAILLE, GR 04	Uncontracted Braille: 11-1/2x11" Manila 100# stock	160	1	2

Document Title	Document Description	# Pgs	# of Fms	Order Qty
SOCIAL STUDIES TEST BOOK, BRAILLE, GR 07	Uncontracted Braille: 11-1/2x11" Manila 100# stock	160	1	2
SCIENCE TEST BOOK, BRAILLE, GR 05	Uncontracted Braille: 11-1/2x11" Manila 100# stock	160	1	2
SCIENCE TEST BOOK, BRAILLE, GR 08	Uncontracted Braille: 11-1/2x11" Manila 100# stock	160	1	2
SOCIAL STUDIES BRAILLE SOURCE BOOK, GR 04	Contracted Braille: 11-1/2x11" Manila 100# stock	24	1	6
SOCIAL STUDIES BRAILLE SOURCE BOOK, GR 07	Contracted Braille: 11-1/2x11" Manila 100# stock	24	1	6
SOCIAL STUDIES BRAILLE SOURCE BOOK, GR 04	Uncontracted Braille: 11-1/2x11" Manila 100# stock	24	1	2
SOCIAL STUDIES BRAILLE SOURCE BOOK, GR 07	Uncontracted Braille: 11-1/2x11" Manila 100# stock	24	1	2
Other Non-Scannable Printed Materials (Manuals, etc.)		372	17	22,164
TEST ADMINISTRATOR MANUALS, GR 04	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints black on white	40	1	4,400
TEST ADMINISTRATOR, GR 05	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints black on white	40	1	4,400
TEST ADMINISTRATOR, GR 07	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints black on white	40	1	4,200
TEST ADMINISTRATOR, GR 08	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints black on white	40	1	4,100
TEST ADMINISTRATOR, GR 04 PAPER/PENCIL ACCOMMODATED FORM	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints black on white	40	1	0
TEST ADMINISTRATOR, GR 05 PAPER/PENCIL ACCOMMODATED FORM	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints black on white	40	1	0
TEST ADMINISTRATOR, GR 07 PAPER/PENCIL ACCOMMODATED FORM	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints black on white	40	1	0
TEST ADMINISTRATOR, GR 08 PAPER/PENCIL ACCOMMODATED FORM	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints black on white	40	1	0
LARGE PRINT ADMINISTRATIVE SUPPLEMENT	11X17 bifold to 8-1/2x11, white on black	4	4	140
BRAILLE ADMINISTRATIVE SUPPLEMENT	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints black on white	8	4	24
DISTRICT AND SCHOOL COORDINATOR MANUAL	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints black on white	40	1	2,300
Non-Printed Non-Stock Materials (CD. Cassettes, Etc.)		864	14	0
ORAL SCRIPTS, SOCIAL STUDIES, GRADE 04 -- ONLINE FORM	Printable PDF, posted for Colorado teacher download. NO PRINT IN BASE BID--POST ONLY	48	1	7,500
ORAL SCRIPTS, SOCIAL STUDIES, GRADE 07 -- ONLINE FORM	Printable PDF, posted for Colorado teacher download. NO PRINT IN BASE BID--POST ONLY	48	1	3,500
ORAL SCRIPTS, SCIENCE, GRADE 05 -- ONLINE FORM	Printable PDF, posted for Colorado teacher download. NO PRINT IN BASE BID--POST ONLY	48	1	7,000
ORAL SCRIPTS, SCIENCE, GRADE 08 -- ONLINE FORM	Printable PDF, posted for Colorado teacher download. NO PRINT IN BASE BID--POST ONLY	48	1	3,000
ORAL SCRIPTS, SPANISH, SCIENCE, GRADE 05 -- ONLINE FORM	Printable PDF, posted for Colorado teacher download. NO PRINT IN BASE BID--POST ONLY	48	1	150
ORAL SCRIPTS, SPANISH, SCIENCE, GRADE 08 -- ONLINE FORM	Printable PDF, posted for Colorado teacher download. NO PRINT IN BASE BID--POST ONLY	48	1	150

Document Title	Document Description	# Pgs	# of Fms	Order Qty
ORAL SCRIPTS, SPANISH, SOCIAL STUDIES, GRADE 04 -- ONLINE FORM	Printable PDF, posted for Colorado teacher download. NO PRINT IN BASE BID--POST ONLY	48	1	200
ORAL SCRIPTS, SPANISH, SOCIAL STUDIES, GRADE 07 -- ONLINE FORM	Printable PDF, posted for Colorado teacher download. NO PRINT IN BASE BID--POST ONLY	48	1	150
ORAL SCRIPTS, SOCIAL STUDIES, GRADE 04 -- PAPER FORM	Printable PDF, posted for Colorado teacher download. NO PRINT IN BASE BID--POST ONLY	48	1	200
ORAL SCRIPTS, SOCIAL STUDIES, GRADE 07 -- PAPER FORM	Printable PDF, posted for Colorado teacher download. NO PRINT IN BASE BID--POST ONLY	48	1	100
ORAL SCRIPTS, SCIENCE, GRADE 05 -- PAPER FORM	Printable PDF, posted for Colorado teacher download. NO PRINT IN BASE BID--POST ONLY	48	1	200
ORAL SCRIPTS, SCIENCE, GRADE 08 -- PAPER FORM	Printable PDF, posted for Colorado teacher download. NO PRINT IN BASE BID--POST ONLY	48	1	100
ORAL SCRIPTS, SPANISH, SOCIAL STUDIES, GRADE 04 -- PAPER FORM	Printable PDF, posted for Colorado teacher download. NO PRINT IN BASE BID--POST ONLY	48	1	100
ORAL SCRIPTS, SPANISH, SOCIAL STUDIES, GRADE 07 -- PAPER FORM	Printable PDF, posted for Colorado teacher download. NO PRINT IN BASE BID--POST ONLY	48	1	50
ORAL SCRIPTS, SPANISH, SCIENCE, GRADE 05 -- PAPER FORM	Printable PDF, posted for Colorado teacher download. NO PRINT IN BASE BID--POST ONLY	48	1	100
ORAL SCRIPTS, SPANISH, SCIENCE, GRADE 08 -- PAPER FORM	Printable PDF, posted for Colorado teacher download. NO PRINT IN BASE BID--POST ONLY	48	1	50
Online Test Administrations		0	4	0
SCIENCE ONLINE TEST, GR 05 -- OPERATIONAL			1	
SCIENCE ONLINE TEST, GR 08 -- OPERATIONAL			1	
SOCIAL STUDY ONLINE TEST, GR 04 -- OPERATIONAL			1	
SOCIAL STUDY ONLINE TEST, GR 07 -- OPERATIONAL			1	
SCIENCE ONLINE BREECH TEST, GR 05	BEGINNING IN 2015 (INTACT 2014 FORM)		0	
SCIENCE ONLINE BREECH TEST, GR 08	BEGINNING IN 2015 (INTACT 2014 FORM)		0	
SOCIAL STUDIES ONLINE BREECH TEST, GR 04	BEGINNING IN 2015 (INTACT 2014 FORM)		0	
SOCIAL STUDIES ONLINE BREECH TEST, GR 07	BEGINNING IN 2015 (INTACT 2014 FORM)		0	

Document Title	Document Description	# Pgs	# of Fms	Order Qty
Non-scannable Test Books/Scripts		**232**	**4**	**1,280**
SCIENCE TEST BOOK--FIELD TEST, HS	8-3/8X10-7/8 self cover booklet, black tape binding 50# white offset, prints black on white, all pages	124	2	640
SOCIAL STUDIES STUDENT MATERIALS--FIELD TEST, HS	8-3/8X10-7/8 self cover booklet,black tape binding 50# white offset, prints black on white, all pages	108	2	640
Other Non-Scannable Printed Materials (Manuals, etc.)		**184**	**6**	**2,280**
COORDINATOR MANUAL	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints black on cover, black all interior	32	1	700
EXAMINER'S MANUAL	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints black on cover, black all interior	32	1	300
SCIENCE STUDENT MATERIALS--FIELD TEST, HS **FORM 1**	Simplex print, black on white card stock one side and wraped as set.	38	1	320
SCIENCE STUDENT MATERIALS--FIELD TEST, HS **FORM 2**	Simplex print, black on white card stock one side and wraped as set.	38	1	320
SOCIAL STUDIES STUDENT MATERIALS--FIELD TEST, HS **FORM 1**	Simplex print, black on white card stock one side and wraped as set.	22	1	320
SOCIAL STUDIES STUDENT MATERIALS--FIELD TEST, HS **FORM2**	Simplex print, black on white card stock one side and wraped as set.	22	1	320
Miscellaneous Materials (Stock)		**5**	**1**	**-**
LABELS, SECURITY LISTS, PACKAGING LISTS, ENVELOPES (9x12), BROWN KRAFT, MEMO, CERTIFICATION FORM	Stock items	5	1	-

Document Title	Document Description	# Pgs	# of Fms	Order Qty
Non-scannable Test Books/Scripts		388	5	1,920
SCIENCE TEST BOOK--OPERATIONAL TEST, GRADE 5	8-3/8X10-7/8 self cover booklet, plastic coil binding, 50# white offset, prints blqck on white, all pages	100	1	640
SCIENCE TEST BOOK--OPERATIONAL TEST, GRADE 8	8-3/8X10-7/8 self cover booklet, plastic coil binding, 50# white offset, prints blqck on white, all pages	88	2	320x2 = 640
SOCIAL STUDIES TEST BOOK--OPERATIONAL TEST, GRADE 7	8-3/8X10-7/8 self cover booklet, plastic coil binding, 50# white offset, prints blqck on white, all pages	100	1	640
SOCIAL STUDIES TEST BOOK--OPERATIONAL TEST, GRADE 4	8-3/8X10-7/8 self cover booklet, plastic coil binding, 50# white offset, prints blqck on white, all pages	100	1	640
Other Non-Scannable Printed Materials (Manuals, etc.)		116	5	2,560
SCIENCE STUDENT MATERIALS--OPERATIONAL TEST, GRADE 5 - **FORM 1**	Simplex print, black on white card stock one side and wraped as set.	24	1	640
SCIENCE STUDENT MATERIALS--OPERATIONAL TEST, GRADE 8 - **FORM 1**	Simplex print, black on white card stock one side and wraped as set.	22	1	320
SCIENCE STUDENT MATERIALS--OPERATIONAL TEST, GRADE 8 - **FORM 2**	Simplex print, black on white card stock one side and wraped as set.	22	1	320
SOCIAL STUDIES STUDENT MATERIALS--OPERATIONAL TEST, GRADE 4 - **FORM 1**	Simplex print, black on white card stock one side and wraped as set.	24	1	640
SOCIAL STUDIES STUDENT MATERIALS--OPERATIONAL TEST, GRADE 7 - **FORM 1**	Simplex print, black on white card stock one side and wraped as set.	24	1	640
Miscellaneous Materials (Stock)		5	1	-
LABELS, SECURITY LISTS, PACKAGING LISTS, ENVELOPES (9x12), BROWN KRAFT, MEMO	Stock items	5	1	-

Document Title	Document Description	# Pgs	# of Fms	Order Qty
Non-scannable Test Books/Scripts		352	6	1,920
SCIENCE AND SOCIAL STUDIES TEST BOOK -OPERATIONAL TEST, HS	8-3/8X10-7/8 booklet, perfect bound, prints black on 50# white offset all interior	176	2	640
Other Non-Scannable Printed Materials (Manuals, etc.)		96	6	
SCIENCE AND SOCIAL STUDIES STUDENT MATERIALS--OPERATIONAL TEST, HS **FORM 1**	Simplex print, black on white card stock one side and wraped as set.	28	1	320
SCIENCE AND SOCIAL STUDIES STUDENT MATERIALS--OPERATIONAL TEST, HS **FORM 2**	Simplex print, black on white card stock one side and wraped as set.	28	1	320
Miscellaneous Materials (Stock)		5	1	-
LABELS, SECURITY LISTS, PACKAGING LISTS, ENVELOPES (9x12), BROWN KRAFT, MEMO	Stock items	5	1	-

Document Title	Document Description	# Pgs	# of Fms	Order Qty
Non-scannable Test Books/Scripts		388	5	1,920
SCIENCE TEST BOOK--OPERATIONAL TEST, GRADE 5	8-3/8X10-7/8 self cover booklet, plastic coil binding, 50# white offset, prints blqck on white, all pages	100	1	640
SCIENCE TEST BOOK--OPERATIONAL TEST, GRADE 8	8-3/8X10-7/8 self cover booklet, plastic coil binding, 50# white offset, prints blqck on white, all pages	88	2	320x2 = 640
SOCIAL STUDIES TEST BOOK-- OPERATIONAL TEST, GRADE 7	8-3/8X10-7/8 self cover booklet, plastic coil binding, 50# white offset, prints blqck on white, all pages	100	1	640
SOCIAL STUDIES TEST BOOK-- OPERATIONAL TEST, GRADE 5	8-3/8X10-7/8 self cover booklet, plastic coil binding, 50# white offset, prints blqck on white, all pages	100	1	640
Other Non-Scannable Printed Materials (Manuals, etc.)		116	5	2,560
SCIENCE STUDENT MATERIALS-- OPERATIONAL TEST, GRADE 5 - **FORM 1**	Simplex print, black on white card stock.	24	1	640
SCIENCE STUDENT MATERIALS-- OPERATIONAL TEST, GRADE 8 - **FORM 1**	Simplex print, black on white card stock.	22	1	320
SCIENCE STUDENT MATERIALS-- OPERATIONAL TEST, GRADE 8 - **FORM 2**	Simplex print, black on white card stock.	22	1	320
SOCIAL STUDIES STUDENT MATERIALS-- OPERATIONAL TEST, GRADE 4 - **FORM 1**	Simplex print, black on white card stock.	24	1	640
SOCIAL STUDIES STUDENT MATERIALS-- OPERATIONAL TEST, GRADE 7 - **FORM 1**	Simplex print, black on white card stock.	24	1	640
Miscellaneous Materials (Stock)		5	1	-
LABELS, SECURITY LISTS, PACKAGING LISTS, ENVELOPES (9x12), BROWN KRAFT, MEMO	Stock items	5	1	-

Document Title	Document Description	# Pgs	# of Fms	Order Qty
Non-scannable Test Books/Scripts		176	2	640
SCIENCE AND SOCIAL STUDIES TEST BOOK--OPERATIONAL TEST, HS	8-3/8X10-7/8 booklet, plastic coil binding, prints black on 50# white offset all interior	176	2	640
Other Non-Scannable Printed Materials (Manuals, etc.)		56	2	640
SCIENCE AND SOCIAL STUDIES STUDENT MATERIALS--OPERATIONAL TEST, HS **FORM 1**	Simplex print, black on white card stock.	28	1	320
SCIENCE AND SOCIAL STUDIES STUDENT MATERIALS--OPERATIONAL TEST, HS **FORM 2**	Simplex print, black on white card stock.	28	1	320
Non-Printed Non-Stock Materials (CD, Etc.): Not Used		-	-	-
Miscellaneous Materials (Stock)		5	1	-
LABELS, SECURITY LISTS, PACKAGING LISTS, ENVELOPES (9x12), BROWN KRAFT, MEMO	Stock items	5	1	-

Exhibit E
Payment Schedule for Contract Period December 21, 2012 through August 30, 2014

	INVOICE DATE	INVOICE AMOUNT	Completed Associated Tasks and Services	
Payment 1	March 15, 2013	$2,547,585.50	Content Development (Items Round 1 and Form Development)	$1,456,302.50
			Ancillary Development	$69,565.00
			Program Management	$552,085.50
			Quality Assurance	$49,692.50
			Travel and Meetings (planning meetings, item development, bias review, administration training, scorer training, technology coordinator training, site readiness training, district assessment coordinator training)	$419,940.00
Payment 2	June 15, 2013	$3,563,919.50	Content Development (Items Round 2)	$1,055,209.50
			Ancillary Development	($17,725.00)
			Program Management	$437,779.50
			Information Technology	$211,524.00
			Psychometrics	$302,040.00
			Quality Assurance	$16,437.50
			Test Delivery System	661,844.00
			Production/Manufacturing/Distribution	$208,485.00
			Receiving/Scanning/Editing	$1,660.00
			Reporting	$139,162.00
			Scoring	$514,827.00
			Travel and Meetings (planning meetings, item development, range finding, data review, item review, materials management training, cognitive labs)	$32,676.00
TOTAL FOR FY2013		$6,111,505.00		
Payment 3	September 15, 2013	$1,154,148.00	Content Development	$401,093.00
			Ancillary Development	$17,725.00
			Program Management	$114,306.00
			Information Technology	$7,032.00
			Psychometrics	$41,337.00
			Quality Assurance	$33,255.00
			Test Delivery System	$0
			Production/Manufacturing/Distribution	$41,059.00
			Receiving/Scanning/Editing	$734.00
			Reporting	$215,728.00
			Scoring	$174,575.00
			Travel and Meetings	$107,304.00
Payment 4	December 15, 2013	$2,240,413.90	Content Development	$734,159.20
			Ancillary Development	$77,897.00
			Program Management	$431,750.00
			Information Technology	$69,627.00
			Psychometrics	$55,926.75
			Quality Assurance	$19,110.20
			Test Delivery System	$270,173.00
			Production/Manufacturing/Distribution	$33,980.75
			Receiving/Scanning/Editing	0
			Reporting	$47,619.50
			Scoring	$292,393.50
			Travel and Meetings	$207,777.00

	INVOICE DATE	INVOICE AMOUNT	Completed Associated Tasks and Services	
Payment 5	March 15, 2014	$1,466,513.78	Content Development	$378,417.40
			Ancillary Development	$31,874.00
			Program Management	$273,028.00
			Information Technology	$76,659.00
			Psychometrics	$58,358.25
			Quality Assurance	$26,182.60
			Test Delivery System	0
			Production/Manufacturing/Distribution	$201,106.53
			Receiving/Scanning/Editing	0
			Reporting	$263,347.50
			Scoring	0
			Travel and Meetings	$157,540.50
Payment 6	June 15, 2014	$3,157,974.55	Content Development	$378,417.40
			Ancillary Development	0
			Program Management	$273,028.00
			Information Technology	$153,318.00
			Psychometrics	$136,169.25
			Quality Assurance	$39,273.90
			Test Delivery System	$270,173.00
			Production/Manufacturing/Distribution	0
			Receiving/Scanning/Editing	$33,132.00
			Reporting	$316,017.00
			Scoring	$1,400,905.50
			Travel and Meetings	$157,540.50
TOTAL FOR FY2014		$8,019,050.23		
Payment 7	August 15, 2014	$345,045.77	Content Development	0
			Ancillary Development	0
			Program Management	0
			Information Technology	0
			Psychometrics	$97,263.75
			Quality Assurance	$13,091.30
			Test Delivery System	0
			Production/Manufacturing/Distribution	$24,012.72
			Receiving/Scanning/Editing	0
			Reporting	$210,678.00
			Scoring	0
			Travel and Meetings	0
TOTAL FOR FY2015		$345,045.77		
TOTAL FOR July 1, 2013 – August 30, 2014		$8,364,096.00		
TOTAL FOR Initial Contract Period		$14,475,601.00		

Exhibit F: Colorado - Summative Alternate Assessment Pricing Data

	Total Price												Total Costs	Total Costs REVISED
	Initial Development - May 1, 2012 - June 30, 2013		Ongoing Administration								July 1, 2017 - December 31, 2017			
	New Assessment Development	Revised Prices	Year 1 - July 1, 2013 - June 30, 2014	Revised Prices	Year 2 - July 1, 2014 - June 30, 2015	Revised Prices	Year 3 - July 1, 2015 - June 30, 2016	Revised Prices	Year 4 - July 1, 2016 - June 30, 2017	Revised Prices	Transition Activities - Final Year Closeout	Revised Prices	Total Costs	Total Costs REVISED
Content Development	**$2,912,605**	**$2,511,512**	**$1,525,404**	**$1,892,087**	**$1,175,955**	**$1,175,955**	**$1,056,205**	**$1,056,205**	**$1,042,904**	**$1,042,904**	**$134,480**	**$168,890**	**$7,847,553**	**$7,847,553**
Summative	$1,983,746	$1,782,253	$1,338,395	$1,505,478	$1,101,440	$1,101,440	$975,664	$975,664	$959,461	$959,461	$134,480	$168,890	$6,493,186	$6,493,186
Alternate (Science & Social Studies Only)	$928,859	$729,259	$187,009	$386,609	$74,515	$74,515	$80,541	$80,541	$83,443	$83,443	$0	$0	$1,354,367	$1,354,367
Ancillary Development	**$69,565**	**$51,840**	**$141,466**	**$127,496**	**$127,138**	**$127,138**	**$113,548**	**$113,548**	**$111,933**	**$111,933**	**$0**	**$36,695**	**$563,650**	**$568,650**
Summative	$60,494	$45,773	$137,322	$121,931	$122,382	$122,382	$108,407	$108,407	$106,607	$106,607	$0	$35,112	$535,212	$540,212
Alternate (Science & Social Studies Only)	$9,071	$6,067	$4,144	$5,565	$4,756	$4,756	$5,141	$5,141	$5,326	$5,326	$0	$1,583	$28,438	$28,438
Program Management	**$1,104,171**	**$989,865**	**$1,206,418**	**$1,092,112**	**$1,227,831**	**$1,113,525**	**$1,082,848**	**$968,542**	**$926,594**	**$812,288**	**$145,329**	**$410,134**	**$5,693,191**	**$5,386,466**
Summative	$797,873	$740,720	$780,270	$723,117	$780,373	$723,220	$602,903	$545,750	$580,322	$523,169	$78,661	$240,848	$3,620,402	$3,496,824
Alternate (Science & Social Studies Only)	$306,298	$249,145	$426,148	$368,995	$447,458	$390,305	$479,945	$422,792	$346,272	$289,119	$66,668	$169,286	$2,072,789	$1,889,642
Information Technology	**$218,556**	**$211,524**	**$299,604**	**$306,636**	**$322,789**	**$322,789**	**$228,346**	**$228,346**	**$236,498**	**$236,498**	**$0**	**$0**	**$1,305,793**	**$1,305,793**
Summative	$57,820	$50,788	$55,300	$62,332	$48,959	$48,959	$47,274	$47,274	$37,491	$37,491	$0	$0	$246,844	$246,844
Alternate (Science & Social Studies Only)	$160,736	$160,736	$244,304	$244,304	$273,830	$273,830	$181,072	$181,072	$199,007	$199,007	$0	$0	$1,058,949	$1,058,949
Psychometrics	**$343,377**	**$302,040**	**$428,288**	**$389,055**	**$292,128**	**$350,934**	**$257,711**	**$314,494**	**$233,544**	**$285,675**	**$125,157**	**$215,727**	**$1,680,205**	**$1,857,925**
Summative	$175,019	$153,577	$181,398	$160,918	$182,385	$222,997	$161,076	$200,119	$144,675	$180,813	$68,842	$120,764	$913,395	$1,039,188
Alternate (Science & Social Studies Only)	$168,358	$148,463	$246,890	$228,137	$109,743	$127,937	$96,635	$114,375	$88,869	$104,862	$56,315	$94,963	$766,810	$818,737
Quality Assurance	**$99,385**	**$66,130**	**$137,627**	**$130,913**	**$155,291**	**$216,446**	**$139,861**	**$197,387**	**$131,423**	**$184,922**	**$0**	**$49,616**	**$663,587**	**$845,414**
Summative	$69,947	$46,583	$91,182	$87,050	$102,522	$143,369	$93,024	$131,051	$91,067	$127,070	$0	$34,143	$447,742	$569,266
Alternate (Science & Social Studies Only)	$29,438	$19,547	$46,445	$43,863	$52,769	$73,077	$46,837	$66,336	$40,356	$57,852	$0	$15,473	$215,845	$276,148
Test Delivery System	**$497,197**	**$661,844**	**$422,102**	**$540,346**	**$470,241**	**$745,248**	**$453,336**	**$714,720**	**$434,878**	**$675,685**	**$0**	**$217,470**	**$2,277,754**	**$3,555,313**
Summative	$332,180	$432,213	$314,303	$408,155	$338,809	$512,389	$348,264	$514,747	$319,405	$473,797	$0	$141,813	$1,652,961	$2,483,114
Alternate (Science & Social Studies Only)	$165,017	$229,631	$107,799	$132,191	$131,432	$232,859	$105,072	$199,973	$115,473	$201,888	$0	$75,657	$624,793	$1,072,199
Production_Mfg_Dist	**$249,544**	**$208,485**	**$310,779**	**$300,159**	**$318,496**	**$380,661**	**$276,182**	**$317,845**	**$269,353**	**$290,210**	**$0**	**$54,260**	**$1,424,354**	**$1,551,620**
Summative	$145,531	$104,472	$199,359	$210,483	$214,365	$270,666	$179,089	$215,541	$171,075	$186,656	$0	$29,327	$909,419	$1,017,145
Alternate (Science & Social Studies Only)	$104,013	$104,013	$111,420	$89,676	$104,131	$109,995	$97,093	$102,304	$98,278	$103,554	$0	$24,933	$514,935	$534,475
Receiving/Scanning/Editing	**$2,394**	**$1,660**	**$12,828**	**$33,866**	**$13,645**	**$58,376**	**$14,547**	**$58,587**	**$15,006**	**$57,687**	**$0**	**$14,382**	**$58,420**	**$224,558**
Summative	$0	$0	$10,155	$31,356	$11,935	$56,240	$12,697	$56,327	$13,248	$55,622	$0	$13,485	$48,035	$213,030
Alternate (Science & Social Studies Only)	$2,394	$1,660	$2,673	$2,510	$1,710	$2,136	$1,850	$2,260	$1,758	$2,065	$0	$897	$10,385	$11,528
Reporting	**$519,537**	**$139,162**	**$844,883**	**$1,053,390**	**$593,517**	**$753,743**	**$567,100**	**$721,865**	**$549,395**	**$694,536**	**$0**	**$361,868**	**$3,074,432**	**$3,724,564**
Summative	$514,454	$134,079	$658,199	$913,042	$421,258	$517,230	$429,966	$523,184	$396,896	$485,007	$0	$275,532	$2,420,773	$2,848,074
Alternate (Science & Social Studies Only)	$5,083	$5,083	$186,684	$140,348	$172,259	$236,513	$137,134	$198,681	$152,499	$209,529	$0	$86,336	$653,659	$876,490
Scoring	**$689,402**	**$514,827**	**$1,985,965**	**$1,867,874**	**$2,065,405**	**$2,065,405**	**$1,951,659**	**$1,951,659**	**$1,941,174**	**$1,941,174**	**$0**	**$310,391**	**$8,633,605**	**$8,651,330**
Summative	$689,402	$514,827	$1,985,965	$1,867,874	$2,065,405	$2,065,405	$1,951,659	$1,951,659	$1,941,174	$1,941,174	$0	$310,391	$8,633,605	$8,651,330
Alternate (Science & Social Studies Only)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Travel and Meetings	**$559,920**	**$452,616**	**$752,260**	**$630,162**	**$559,345**	**$570,060**	**$649,617**	**$610,332**	**$603,905**	**$564,620**	**$69,483**	**$83,279**	**$3,194,530**	**$2,911,069**
Summative	$321,083	$274,957	$348,575	$315,034	$232,574	$303,611	$294,649	$315,686	$256,356	$277,393	$37,196	$46,942	$1,490,433	$1,533,623
Alternate (Science & Social Studies Only)	$238,837	$177,659	$403,685	$315,128	$326,771	$266,449	$354,968	$294,646	$347,549	$287,227	$32,287	$36,337	$1,704,097	$1,377,446
Grand Total - Summative	**$5,147,549**	**$4,280,242**	**$6,100,423**	**$6,406,770**	**$5,622,407**	**$6,087,908**	**$5,204,672**	**$5,585,409**	**$5,017,777**	**$5,354,260**	**$319,179**	**$1,417,247**	**$27,412,007**	**$29,131,836**
Grand Total - Alternate (Science & Social Studies Only)	**$2,118,104**	**$1,831,263**	**$1,967,201**	**$1,957,326**	**$1,699,374**	**$1,792,372**	**$1,586,288**	**$1,668,121**	**$1,478,830**	**$1,543,872**	**$155,270**	**$505,465**	**$9,005,067**	**$9,298,419**
Grand Total - Summative & Alternate Assessment	**$7,265,653**	**$6,111,505.00**	**$8,067,624**	**$8,364,096.00**	**$7,321,781**	**$7,880,280**	**$6,790,960**	**$7,253,530**	**$6,496,607**	**$6,898,132**	**$474,449**	**$1,922,712**	**$36,417,074**	**$38,430,255**
Grand Total - Summative & Alt w/o Dashboard		**$6,111,505**		**$7,717,093**		**$7,774,298**		**$7,144,369**		**$6,784,604**		**$1,922,712**		**$37,454,581**

Grand total should be equal to vendor's total contract price to the customer, excluding options or alternatives