## REQUEST FOR PROPOSALS FOR

Multi-Platform Construction Documentation System (CDS)

ISSUING OFFICE

Pennsylvania Turnpike Commission
Contracts Administration Department
On behalf of the
Engineering - Construction Department

RFP NUMBER

19-40120-8569

## DATE OF ISSUANCE

May 22, 2019

## REQUEST FOR PROPOSALS FOR

Multi-Platform Construction Documentation System (CDS)

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## CALENDAR OF EVENTS

RFP\# 19-40120-8569

The Commission reserves the right to make changes or alterations to this schedule as the Commission determines is in its best interest.

| Activity | Date | Time |
| :--- | :---: | :---: |
| Request for Proposals Issued | May 22, 2019 | N/A |
| Deadline for Proposers to Submit Questions via email to <br> $\underline{\text { RFP-Q@paturnpike.com }}$ | June 10, 2019 | 2:00 PM |
| Answers to Proposer questions posted to the Commission website at <br> https://www.paturnpike.com/Procurement/Bidlist.aspx?RTYPE=O | June 17, 2019 | N/A |
| (Estimate Only) | July 2, 2019 | 2:00 PM |
| Due Date for Proposals | TBD | TBD |
| Oral Clarifications/Presentations (If necessary) | January, 2020 | N/A |
| Anticipated Notice to Proceed (Estimate Only) |  |  |

## PART I

## GENERAL INFORMATION FOR PROPOSERS

I-1. Purpose. This request for proposals (RFP) provides interested Proposers with sufficient information to enable them to prepare and submit proposals for consideration by the Pennsylvania Turnpike Commission (Commission) to satisfy a need for a Multi-Platform Construction Documentation System (CDS).

I-2. Issuing Office. This RFP is issued for the Commission by the Contracts Administration Department on behalf of the Engineering - Construction Department.

I-3. Scope. This RFP contains instructions governing the proposals to be submitted and the material to be included therein; a description of the service to be provided; requirements which must be met to be eligible for consideration; general evaluation criteria; and other requirements to be met by each proposal.

I-4. Problem Statement. The Engineering - Construction Department is responsible for managing all documents associated with construction projects at the Turnpike Commission. Stakeholders use a cumbersome client/server application to manage these documents, relying extensively on hard-copy printouts of forms and reports. The Commission wishes to increase automation in the work flow, as described in this RFP, including use of iPads at the work site and laptops/PCs with Internet connectivity. This project is a technology refresh to replace the client/server model with new technology.

I-5. Type of Contract. The Commission intends to award one contract as a result of this RFP. It is proposed that if a contract is entered into as a result of this RFP, it will be a fixed-fee, deliverables-based contract. The Commission may, in its sole discretion, undertake negotiations with Proposers whose proposals’ price and other factors show them to be qualified, responsible, responsive, and capable of performing the work. A sample Contractual Agreement is provided in Appendix A.

I-6. Contractor Integrity Provisions. Contractor Integrity Provisions will apply to this contract upon award. The awarded vendor may be required to complete a Background Qualifications Questionnaire prior to entering into an Agreement with the Commission and attend annual ethics training provided by the Commission. Proposers can find the Integrity Provisions and other related documents on the Commission's website at www.paturnpike.com (Doing Business, General Information, Integrity Provisions).

Include full disclosure of any potential conflict with the State Adverse Interest Act, 71 P.S. § 776.3, for a State Advisor or State Consultant by the prime or any subconsultant. If there is no adverse interest, you shall include the following statement: "I have reviewed the State Adverse Interest Act and determined that there is no adverse interest for anyone on this Agreement team." This information should be included in your transmittal letter/cover page or executive summary.

I-7. Rejection of Proposals. The Commission reserves the right to reject any and all proposals received as a result of this request, or to negotiate separately with competing Proposers.

I-8. Subcontracting. Any use of subcontractors by a Proposer must be identified in the proposal. During the contract period, use of any subcontractors by the selected Proposer who were not previously identified in the proposal must be approved in advance in writing by the Commission.

If a Joint Venture responds to this RFP, the Commission will not accept separate proposals from joint venture constituents. A firm will not be permitted to submit a proposal on more than one (1) joint venture for the same RFP. Also, a firm that responds to this RFP as a prime may not be included as a designated subconsultant to another firm that responds to the same RFP. Multiple responses under any of the foregoing situations will cause the rejection of all responses of the firm or firms involved. This does not preclude a firm from being set forth as a designated subconsultant to more than one prime consultant responding to the RFP.

I-9. Incurring Costs. The Commission is not liable for any costs the Proposer incurs in preparation and submission of its proposal, in participating in the RFP process or in anticipation of award of contract.

I-10. Procurement Schedule of Events. The current Schedule for Key Procurement Dates for this procurement process leading to an award of the Contract is provided in the Calendar of Events, page 1 of this RFP. The Commission reserves the right to make changes or alterations to this schedule as the Commission determines is in its best interest. All changes to these dates and/or times up to and including the due date for Proposals will be issued as an addendum to this RFP, will become part of this RFP, and will be posted to the Commission's website at https://www.paturnpike.com/procurement/Bidlist.aspx?rtype=o.

Unless otherwise notified in writing by the Commission, the dates indicated below for submission of items or for other required actions on the part of a Proposer shall constitute absolute deadlines for those activities and failure to fully comply by the time and date stated shall cause a Proposer to be disqualified. All times stated are in Harrisburg, PA, local time and are subject to change.
I.11. Questions and Answers. There will be no pre-proposal conference for this RFP. No negotiations, decisions, or actions shall be initiated or executed by a Proposer as a result of any oral discussions with any Commission member, employee, consultant/contractor. Written questions may be submitted to clarify any points in the RFP which may not have been clearly understood. Written questions shall be submitted by email to RFP-Q@paturnpike.com with RFP 19-40120-8569 in the subject line to be received no later than the date and time provided on the Calendar of Events. All questions and written answers will be issued as an addendum to and become part of this RFP and will be posted to the Commission's website at (http://www.paturnpike.com/procurement/Bidlist.aspx?rtype=o) approximately on or before the date provided on the Calendar of Events and only if necessary. Proposers shall use the form provided in Appendix B to submit the questions.

I-12. Addenda to the RFP. If it becomes necessary to revise any part of this RFP before the proposal response date, addenda will be posted to the Commission's website under the original RFP document (http://www.paturnpike.com/procurement/Bidlist.aspx?rtype=o). It is the responsibility of the Proposer to periodically check the website for any new information or addenda to the RFP.

The Commission may revise a published advertisement. If the Commission revises published advertisement less than 10 days before the RFP due date, the due date will be extended to maintain the minimum 10-day advertisement duration if the revision alters the project scope or selection criteria. Firms are responsible to monitor advertisements/addenda to ensure the submitted proposal complies with any changes in the published advertisement.

I-13. Response. To be considered, proposals must be delivered to the Pennsylvania Turnpike Commission's Contracts Administration Department, Attention: Wendy Callahan, on or before the date
and time provided on the Calendar of Events. The Commission will not accept proposals via email or facsimile transmission.

## Overnight Delivery Address:

Contracts Administration Department
Attn: Wendy Callahan
PA Turnpike Commission
700 South Eisenhower Blvd.
Middletown, PA 17057
Phone: (717) 831-7227

US Mail Delivery Address:<br>Contracts Administration Department<br>Attn: Wendy Callahan<br>PA Turnpike Commission<br>P.O. Box 67676<br>Harrisburg, PA 17106

Please note that use of U.S. Mail, FedEx, UPS, or other delivery method does not guarantee delivery to the Contracts Administration Department by the above listed time for submission. Proposers mailing proposals should allow sufficient delivery time to ensure timely receipt of their proposals. If the Commission office location to which proposals are to be delivered is closed on the proposal response date, due to inclement weather, natural disaster, or any other cause, the deadline for submission shall be automatically extended until the next Commission business day on which the office is open. Unless the Proposers are otherwise notified by the Commission, the time for submission of proposals shall remain the same.

I-14. Proposals. To be considered, Proposers should submit a complete response to this RFP, using the format provided in PART II. Each proposal should be submitted in six (6) hard copies of the Technical Submittal, six (6) hard copies of the Diverse Business (DB) participation submittal, and six (6) hard copies of the Cost Submittal. In addition to the hard copies of the proposal, submit two complete and exact copies of the Technical, Cost, and DB submittals, along with all requested documents on CD-ROM or Flash Drive in Microsoft Office or Microsoft Office-compatible format. The electronic copy must be a mirror image of the hard copy. Proposer should ensure that there is no costing information in the technical submittal. The CD or Flash drive should clearly identify the Proposer and include the name and version number of the virus scanning software that was used to scan the CD or Flash drive before it was submitted. The Proposer shall present the proposal to the Contracts Administration Department only. No other distribution of proposals will be made by the Proposer. Each proposal page should be numbered for ease of reference.

An official authorized to bind the Proposer to its Proposal must sign the proposal. If the official signs the Proposal Cover Sheet (Appendix C to this RFP) and the Proposal Cover Sheet is attached to the proposal, the requirement will be met. For this RFP, the proposal must remain valid for at least $\mathbf{1 8 0}$ calendar days. Moreover, the contents of the proposal of the selected Proposer will become contractual obligations if a contract is entered into.

Each and every Proposer submitting a proposal specifically waives any right to withdraw or modify it, except as hereinafter provided. Proposals may be withdrawn by written or fax notice (fax number (717) 986-8714) received at the Commission's address for proposal delivery prior to the exact hour and date specified for proposal receipt.

However, if the Proposer chooses to attempt to provide such written notice by fax transmission, the Commission shall not be responsible or liable for errors in fax transmission. A proposal may also be withdrawn in person by a Proposer or its authorized representative, provided his/her identity is made known and he/she signs a receipt for the proposal, but only if the withdrawal is made prior to the exact hour and date set for proposal receipt. A proposal may only be modified by the submission of a new
sealed proposal or submission of a sealed modification which complies with the requirements of this solicitation.

I-15. Economy of Preparation. Proposals should be prepared simply and economically, providing a straightforward, concise description of the Proposer's ability to meet the requirements of the RFP.

I-16. Discussions for Clarification. Proposers who submit proposals may be required to make an oral or written clarification of their proposals to the Issuing Office through the Contract Administration Department to ensure thorough mutual understanding and Proposer responsiveness to the solicitation requirements. The Issuing Office through the Contract Administration Department will initiate requests for clarification.

I-17. Best and Final Offers. The Issuing Office reserves the right to conduct discussions with Proposers for the purpose of obtaining "best and final offers." To obtain best and final offers from Proposers, the Issuing Office may do one or more of the following: a) enter into pre-selection negotiations; b) schedule oral presentations; and c) request revised proposals. The Issuing Office will limit any discussions to responsible Proposers whose proposals the Issuing Office have determined to be reasonably susceptible of being selected for award.

I-18. Prime Proposer Responsibilities. The selected Proposer will be required to assume responsibility for all services offered in its proposal, whether or not it produces them. Further, the Commission will consider the selected Proposer to be the sole point of contact (POC) with regard to contractual matters.

I-19. Proposal Contents. Proposals will be held in confidence and will not be revealed or discussed with competitors, unless disclosure is required to be made (i) under the provisions of any Commonwealth or United States statute or regulation; or (ii) by rule or order of any court of competent jurisdiction. All material submitted with the proposal becomes the property of the Pennsylvania Turnpike Commission and may be returned only at the Commission's option. Proposals submitted to the Commission may be reviewed and evaluated by any person other than competing Proposers, at the discretion of the Commission. The Commission has the right to use any or all ideas presented in any proposal. Selection or rejection of the proposal does not affect this right.

In accordance with the Pennsylvania Right-to-Know Law (RTKL), 65 P.S. § 67.707 (Production of Certain Records), Proposers shall identify any and all portions of their Proposal that contains confidential proprietary information or is protected by a trade secret. Proposals shall include a written statement signed by a representative of the company/firm identifying the specific portion(s) of the Proposal that contains the trade secret or confidential proprietary information.

Proposers should note that "trade secrets" and "confidential proprietary information" are exempt from access under Section 708(b)(11) of the RTKL. Section 102 defines both "trade secrets" and "confidential proprietary information" as follows:

Confidential proprietary information: Commercial or financial information received by an agency: (1) which is privileged or confidential; and (2) the disclosure of which would cause substantial harm to the competitive position of the person that submitted the information.

Trade secret: Information, including a formula, drawing, pattern, compilation, including a customer list, program, device, method, technique or process that: (1) derives independent economic value, actual or potential, from not being generally known to and not being readily ascertainable by proper
means by other persons who can obtain economic value from its disclosure or use; and (2) is the subject of efforts that are reasonable under the circumstances to maintain its secrecy. The term includes data processing software by an agency under a licensing agreement prohibiting disclosure.

65 P.S. §67.102 (emphasis added).
The Office of Open Records has determined that a third party must establish a trade secret based upon factors established by the appellate courts, which include the following:
the extent to which the information is known outside of his business;
the extent to which the information is known by employees and others in the business;
the extent of measures taken to guard the secrecy of the information;
the value of the information to his business and to competitors;
the amount of effort or money expended in developing the information; and the ease of difficulty with which the information could be properly acquired or duplicated by others.

See Crum v. Bridgestone/Firestone North Amer. Tire., 907 A.2d 578, 585 (Pa. Super. 2006).
The Office of Open Records also notes that with regard to "confidential proprietary information the standard is equally high and may only be established when the party asserting protection shows that the information at issue is either 'commercial' or 'financial' and is privileged or confidential, and the disclosure would cause substantial competitive harm." (emphasis in original).

For more information regarding the RTKL, visit the Office of Open Records’ website at www.openrecords.state.pa.us.

I-20. Debriefing Conferences. Proposers whose proposals are not selected will be notified of the name of the selected Proposer and given the opportunity to be debriefed, at the Proposer's request. The Issuing Office will schedule the time and location of the debriefing. The Proposer will not be compared with other Proposers.

I-21. News Releases. Proposers shall not issue news releases, internet postings, advertisements or any other public communications pertaining to this RFP without prior written approval of the Issuing Office, and then only in coordination with the Issuing Office.

I-22. Commission Participation. Unless specifically noted in this section, Proposers must provide all services to complete the identified work. The Commission will provide a POC for the duration of the project; a representative from the Project Management Office (PMO) to assist with monitoring; and members of the user community as needed for design sessions, user acceptance testing (UAT), and training. The Commission will also provide space for meetings and UAT.

I-23. Cost Submittal. The cost submittal shall be placed in a separately sealed envelope within the sealed proposal and kept separate from the technical submittal.

I-24. Term of Contract. The term of the contract will commence on the Effective Date (as defined below) and will end at a maximum seven years thereafter. The initial contract will be for four years, with annual renewals thereafter at the Commission's discretion. The Commission shall fix the Effective Date after the contract has been fully executed by the Contractor and by the Commission and all approvals required by Commission contracting procedures have been obtained.

I-25. Proposer's Representations and Authorizations. Each Proposer by submitting its proposal understands, represents, and acknowledges that:
a. All information provided by, and representations made by, the Proposer in the proposal are material and important and will be relied upon by the Issuing Office in awarding the contract(s). Any misstatement, omission, or misrepresentation shall be treated as fraudulent concealment from the Issuing Office of the true facts relating to the submission of this proposal. A misrepresentation shall be punishable under 18 Pa. C.S. 4904.
b. The price(s) and amount of this proposal have been arrived at independently and without consultation, communication, or agreement with any other Proposer or potential Proposer.
c. Neither the price(s) nor the amount of the proposal, and neither the approximate price(s) nor the approximate amount of this proposal, have been disclosed to any other firm or person who is a Proposer or potential Proposer, and they will not be disclosed on or before the proposal submission deadline specified in the response section of this RFP.
d. No attempt has been made or will be made to induce any firm or person to refrain from submitting a proposal on this contract, or to submit a proposal higher than this proposal, or to submit any intentionally high or noncompetitive proposal or other form of complementary proposal.
e. The proposal is made in good faith and not pursuant to any agreement or discussion with, or inducement from, any firm or person to submit a complementary or other noncompetitive proposal.
f. To the best knowledge of the person signing the proposal for the Proposer, the Proposer, its affiliates, subsidiaries, officers, directors, and employees are not currently under investigation by any governmental agency and have not in the last four (4) years been convicted or found liable for any act prohibited by State or Federal law in any jurisdiction, involving conspiracy or collusion with respect to bidding or proposing on any public contract, except as disclosed by the Proposer in its proposal.
g. To the best of the knowledge of the person signing the proposal for the Proposer and except as otherwise disclosed by the Proposer in its proposal, the Proposer has no outstanding, delinquent obligations to the Commonwealth including, but not limited to, any state tax liability not being contested on appeal or other obligation of the Proposer that is owed to the Commonwealth.
h. The Proposer is not currently under suspension or debarment by the Commonwealth, any other state, or the federal government; if the Proposer cannot certify, then it shall submit along with the proposal a written explanation of why such certification cannot be made.
i. The Proposer has not, under separate contract with the Issuing Office, made any recommendations to the Issuing Office concerning the need for the services described in the proposal or the specifications for the services described in the proposal.
j. Each Proposer, by submitting its proposal, authorizes all Commonwealth agencies to release to the Commission information related to liabilities to the Commonwealth
including, but not limited to, taxes, unemployment compensation, and workers' compensation liabilities.

I-26. Indemnification. The Proposer shall be responsible for, and shall indemnify, defend, and hold harmless the Commission and its Commissioners, officers, employees, and agents from any claim, liability, damages, losses, causes of action, and expenses, including reasonable attorneys' fees, arising from damage to life or bodily injury or real or tangible personal property caused by the negligence or other tortious acts, errors, and omissions of Proposer, its employees, or its subcontractors while engaged in performing the work of the Agreement or while present on the Commission's premises, and for breach of the Agreement regarding the use or disclosure of proprietary and confidential information where it is determined that Proposer is responsible for any use of such information not permitted by the Agreement. The indemnification obligation shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or its subcontractors under Workers’ Compensation Acts, Disability Benefits Acts, or other Employee Benefit Act.

I-27. Data/Information Security Breach Notification. "Breach" shall mean any successful unauthorized acquisition, access, use, or disclosure of Commission data that compromises the security or privacy of such data.
"Commission Data" means Commission provided information and Commission related information acquired as a result of the services provided to Commission under this Agreement.

Proposer shall report to the Commission any Breach affecting Commission Data. The notice to be provided to the Commission by Proposer shall be provided without unreasonable delay and no later than within 72 hours of Proposer's discovery of any Breach. A Breach shall be deemed to be discovered on the first day on which the Proposer knows or reasonably should have known of the Breach. The notice to be provided to the Commission by Proposer shall be made in writing to the Commission's Information Security Officer and shall include the following content: (1) the nature of the Breach; (2) the specific Commission Data affected by the Breach; (3) the steps the Proposer is taking to remediate the Breach; and (4) steps the Proposer is taking to mitigate future Breaches. Following notification of the Breach, Proposer shall cooperate with the Commission's investigation of the Breach and provide any other information regarding the Breach or the Commission Data affected which the Commission may reasonably request. Should notice to individuals whose information was part of Commission Data be required under any applicable data privacy law, including but not limited to individual state data breach notice laws or federal laws such as HIPAA and Gramm-Leach-Bliley Act, Proposer shall provide the Commission with copies of any template notification letters and draft regulatory correspondence for Commission's prior approval. Proposer shall provide any notifications required under the applicable data privacy laws on behalf of the Commission at the request of Commission. The Commission reserves the right to handle any notifications required and shall notify Proposer if the Commission will be handling the required notifications. Upon request, Proposer shall provide the Commission with its cyber-security policies and procedures. Proposer agrees to reimburse the Commission for any and all reasonable costs associated with the Commission's response to Proposer's Breach, including any fees associated with the Commission's investigation of Proposer's Breach, notification costs, and any reasonable offer of credit or identity monitoring product.

I-28. Security Requirements. Proposer will comply with the Security Requirements are described in Appendix D- Security Requirements.

I-29. Insurance. Proposer will comply with the Insurance requirements as described in Appendix E Insurance Specification.

I-30. Diverse Business (DB) Requirements. Proposer will comply with the DB Requirements as described in Appendix F - Diverse Business (DB) Requirements.

## PART II

## INFORMATION REQUIRED FROM PROPOSERS

Proposals must be submitted in the format, including heading descriptions, outlined below. To be considered, the proposal must respond to all requirements in this part of the RFP. Any other information thought to be relevant, but not applicable to the enumerated categories, should be provided as an appendix to the proposal. All cost data relating to this proposal and all Diverse Business cost data should be kept separate from and not included in the Technical Submittal. Each proposal shall consist of three separately sealed submittals:

1. Technical Submittal, which shall be a response to RFP Part II, Sections II-1 A through G;
2. Diverse Business Participation Submittal, in response to RFP Part II, Section II-2; and
3. Cost Submittal, in response to RFP Part II, Section II-3.

The Commission reserves the right to request additional information which, in the Commission's opinion, is necessary to assure that the Proposer's competence, number of qualified employees, business organization, and financial resources are adequate to perform according to the RFP.

The Commission may make such investigations as deemed necessary to determine the ability of the Proposer to perform the work, and the Proposer shall furnish to the Issuing Office all such information and data for this purpose as requested by the Commission. The Commission reserves the right to reject any proposal if the evidence submitted by, or investigation of, such Proposer fails to satisfy the Commission that such Proposer is properly qualified to carry out the obligations of the agreement and to complete the work specified.

## II-1 Technical Submittal.

A. Proposal Cover Sheet (See Appendix C)

Show the name of your firm, Federal ID number, address, name of contact person, contact person's email and telephone number date, and the subject: Multi-Platform Construction Document System (CDS), RFP 19-40120-8569. Appendix C must be signed by an individual who is authorized to negotiate terms, render binding decisions, and commit your firm's resources. In addition, it is required that all information requested in Appendix C be provided including information pertaining to location of office performing the work, contact information, listing of all Pennsylvania offices and total number of Pennsylvania employees, and location of company headquarters.
B. Table of Contents

Include a clear identification of the material by section and by page number.
C. Executive Summary

Summarize your understanding of the work to be done and make a positive commitment to perform the work necessary. This section should summarize the key points of your submittal. Include in this section or in a transmittal letter/cover page a statement regarding full disclosure
of any potential conflict with the State Adverse Interest of State Advisor or Consultant Statute as instructed in Proposal Section 1.6 Contractor Integrity Provisions.

## D. Firm Overview

Provide a brief history and description of your firm's business organization and its service expertise and experience as it relates to the requirements discussed in Part IV of this RFP. Include the location of offices and the number and types of technology consultants or other relevant professional staff in each office. Discuss your firm's presence in and commitment to the Commonwealth of Pennsylvania. Include a discussion of the specific expertise and services that distinguish your firm. Please attach a copy of your firm's most recent audited financial statement.

If you propose to subcontract any portion of the work described in your response, the subcontracted firm or firms must be identified in this section. The role of the firm or firms should be explained along with a description of the specific expertise and services that the firm or firms contribute to the overall value of your proposal.
E. Personnel

Provide the names, proposed roles, background and experience, current professional licenses, office location, and availability of the consulting personnel that would perform the services as described in Part IV of this RFP. Specifically identify the primary person(s) who will be responsible for managing the relationship with the Commission during this endeavor. Proposer must submit a current resume for all key personnel listing relevant experience and applicable professional affiliations.
F. Relevant Experience and Expertise

Provide a narrative statement regarding your expertise and experience as it relates to Part IV of this RFP. Additionally, include a statement regarding your understanding of the requirements as outlined in this RFP and your ability to provide services in accordance with the same.

Describe your firm's experience in providing similar services to other clients, especially other governmental entities and/or similar public/private sector transportation organizations. Highlight specific experience in civil engineering and in multi-platform technology. Describe the business practices that enable you to complete these tasks in an efficient, timely, and at times, expeditious manner.

Provide a list of three references of clients for which your firm has performed similar work, as described in this RFP, within the past three years. Studies or projects referred to should be identified and the name of the customer shown, including the name, address, and telephone number of the responsible official of the customer, company, or agency who may be contacted.

Include a statement regarding any other specialized services your firm may offer relevant to the services described in the RFP.
G. Approach (Maximum 50 pages)

This section has a maximum of 50 pages. Please include any supporting material in appendices. Proposers must address the following topics:
(1) Solution statement

Identify the selected model for the software/service, referencing one of the options presented at IV-2. Nature and Scope of the Project. Describe the architecture and technical components of the proposed solution. Positively affirm your ability to meet the requirements of Appendix G - Functional/Technical Requirements and Appendix D- Security Requirements.

Please also complete Appendix H - Requirements Traceability and Appendix I - Hosting Questionnaire. Attach both to the technical proposal; these attachments do not count against the 50-page limit.

## (2) Work Plan

Provide a description of the proposed approach/methodology that you will follow, along with a project plan and realistic timeline that identifies the phases and tasks required to complete the services defined in Part IV. Modifications of the task descriptions are permitted; however, reasons for changes should be fully explained.

## Phase I

Attach a work breakdown schedule (WBS) in the form of a Gantt chart and include a description of tasks to be performed. The WBS should follow Project Management Institute (PMI) format. Include an outline or draft of the proposed Project Management Plan (PMP), structured according to the Project Management Body of Knowledge (PMBOK). Note: The Commission will extract elements from the Proposer's PMP for use by its own PMO.

## Phase II

Describe your approach to providing maintenance over the remaining years of the contract. Identify the work location of the team and describe how you will complete support tasks unimpeded by competing requirements from its other customers. Please provide a proposed service level agreement (SLA).
(3) Staffing Plan

Proposer must provide information that identifies the Resources (by position) that will be devoted to the effort during both phases of the project. Indicate the number of fulltime equivalent (FTE) staff or person-hours allocated to each task and describe your methodology for estimating required labor.

## (4) Deliverables and Control Reports

Include in this section the deliverables and reports that will be provided, referencing the requirements at IV-5 Reports and Project Control. Please also describe internal checkpoints or other controls used to ensure high-quality deliverables.

Provide a description of all of the deliverables that you will provide as an output of the project plan. Please ensure they align with deliverables defined in the Cost Submittal.
(5) End of Contract Deliverables

Proposer must describe its process for knowledge transfer and final transition (disentanglement). This will occur either at the end of Phase I or the end of any anniversary year during Phase II, depending on contract option and renewals.
(6) Risk Management

Please identify the top risks associated with this project and your strategy for risk mitigation.

## II-2 Diverse Business (DB) Requirements (Appendix F).

The Commission's Diverse Business (DB) Requirements for this procurement and a resulting contract are identified in Appendix F. There is no minimum participation level (MPL) for DBs established for this contract. However, the utilization of DBs are encouraged and will be considered as a criterion in the evaluation of proposals and may be considered as a factor in the Commission's selection of a firm for this contract.

The proposer must include in its DB participation submittal that it meets the requirements set forth in the Commission’s DB Requirements - Appendix F. In particular, the proposer shall address the section of the DB Requirements labeled, "Actions Required by Proposer during the procurement/consultant selection phase." In addition, the DB participation submittal shall indicate the amount of DB participation incurred in the proposal in terms of dollars committed or percentage of total contract amount.

## II-3 Cost Submittal.

The information requested in this section shall constitute your cost submittal. THE COST SUBMITTAL SHALL BE PLACED IN A SEPARATE SEALED ENVELOPE WITHIN THE SEALED PROPOSAL AND ON A CD-ROM, SEPARATE FROM THE TECHNICAL SUBMITTAL.

Proposers should not include any assumptions in their cost submittals. If the proposer includes assumptions in its cost submittal, the Issuing Office may reject the proposal. Proposers should direct in writing to the Issuing Office pursuant to Part I-11, Questions and Answers of this RFP any questions about whether a cost or other component is included or applies. All Proposers will then have the benefit of the Issuing Office's written answer so that all proposals are submitted on the same basis.

The Proposer must complete Appendix J - Cost Breakdown. All deliverables cited in the Cost Breakdown must be defined in the Technical Proposal. At its discretion, the Commission will negotiate fixed-price changes using the submitted Rate Card.

The selected Proposer shall only perform work on the Contract after the Effective Date is affixed and the fully-executed contract sent to the selected Proposer. The Commission shall issue a written Notice to Proceed to the selected Proposer authorizing the work to begin on a date which is on or after the Effective Date. The selected Proposer shall not start the performance of any work prior to the date set forth in the Notice to Proceed and the Commission shall not be liable to pay the selected Proposer for any service or work performed or expenses incurred before the date set forth in the Notice to Proceed. No Commission employee has the authority to verbally direct the commencement of any work under the Contract.

## PART III

## CRITERIA FOR SELECTION

III-1. Mandatory Responsiveness Requirements. To be eligible for selection, a proposal shall be (a) timely received from a Proposer; and (b) properly signed by the Proposer.

III-2. Technical Nonconforming Proposals. The two (2) Mandatory Responsiveness Requirements set forth in Section III-1 above (a \& b) are the only RFP requirements that the Commission will consider to be non-waivable. The Issuing Office reserves the right, in its sole discretion, to (1) waive any other technical or immaterial nonconformities in the proposal, (2) allow the Proposer to cure the nonconformity, or (3) consider the nonconformity in the evaluation of the proposal.

III-3. Proposal Evaluation. Proposals will be reviewed, evaluated, and rated by a Technical Evaluation Team (TET) of qualified personnel based on the evaluation criteria listed below. The TET will present the evaluations to the Professional Services Procurement Committee (PSPC). The PSPC will review the TET's evaluation and provide the Commission with the firm(s) determined to be highly recommended for this assignment.

The Commission will select the most highly qualified firm for the assignment or the firm whose proposal is determined to be most advantageous to the Commission by considering the TET's evaluation and the PSPC's determination as to each firm's rating. In making the PSPC's determination and the Commission's decision, additional selection factors may be considered taking into account the estimated value, scope, complexity, and professional nature of the services to be rendered and any other relevant circumstances. Additional selection factors may include, when applicable, the following: geographic location and proximity of the firm; firm's Pennsylvania presence or utilization of Pennsylvania employees for the assignment; equitable distribution of work; diversity inclusion; and any other relevant factors as determined as appropriate by the Commission.

Award will only be made to a Proposer determined to be responsive and responsible in accordance with Commonwealth Management Directive 215.9, Contractor Responsibility Program.

III-4. Evaluation Criteria. The following criteria will be used, in order of relative importance from the highest to the lowest, in evaluating each proposal:

1. Proposer and Personnel Qualifications and Experience
a. Proposer's relevant experience and expertise in conducting services as it relates to the requirements discussed in Part IV of this RFP.
b. Qualifications, experience, and competency of professional personnel who will be assigned to the contract by the Proposer including tenure with firm, length of time in the industry, and type of experience.
c. Financial ability of the Proposer to undertake a project of this size.
d. Response of references if the Commission elects to solicit them.
2. Approach
a. Understanding of the Commission's needs and scope of work.
b. Soundness of proposed approach, methodology, and deliverables for implementing and maintaining a multi-platform CDS as described in in Part IV of this RFP.
c. Responsiveness, organization, and clarity of Proposal.
3. Cost.

While this area may be weighted heavily, it will not normally be the deciding factor in the selection process. The Commission reserves the right to select a proposal based upon all the factors listed above and will not necessarily choose the firm offering the best price. The Commission will select the firm with the proposal that best meets its needs, at the sole discretion of the Commission.
4. Commitment to Diversity and Inclusion. This refers to the inclusion of DB firms, as described in Part II-2. Participation may be measured in terms of total dollars committed or percentage of total contract amount to certified DB firms.

## PART IV

## WORK STATEMENT

## IV-1. Objectives.

a. General. The Commission wishes to replace its legacy CDS application with a multi-platform technology that will eliminate/reduce paper copies of inspection documentation and streamline workflow.
b. Specific. This initiative has the following specific objectives:

1. Create an enterprise system/service used by all stakeholders
2. Streamline inspection workflow, using iPads for data entry
3. Eliminate/Reduce clerical work for CDS operator
4. Integrate Quality Assurance (QA) and Materials processes within the system/service

## IV-2. Nature and Scope of the Project.

a. Contract model

The Commission requires a software product, application, or service to replace the current CDS functionality. This can occur in any of the following models:

1. Work for hire: Proposer will create software based on Commission specifications.
2. Public private partnership (PPP) or licensee arrangement: Proposer will create/modify software based on Commission specifications; Proposer will retain ownership of the software.
3. Software as a Service (SaaS): Proposer will modify/configure software based on Commission specifications and license it to the Commission.

Proposers must provide hosting for the new CDS. For model 1, Proposers must provide source code with each release. For models 2 and 3, Proposers must maintain source code in a third-party escrow account and update it with each major release of software.

Please note: Appendix A - Standard Agreement assumes the "work for hire" model. The Commission will negotiate the final terms and conditions based on the model selected.
b. Contract Phases

The Commission envisions Phase I as a two-year period for design/develop/implementation activity, including a production pilot for use on one or more construction projects. During Phase II, beginning in contract Year 3, the Commission will roll out the new software/service across the enterprise, based on newly awarded construction contracts. Proposers are required to provide annual renewable maintenance and support during Phase II.

## IV-3. Requirements.

a. Software Requirements

The Commission requires a software product/service that will support the business functions described in Appendix K - Use Cases.

The following statements help delimit the technical scope of work:

1. Users will share a single hosted database for all construction projects.
2. Inspectors will work offline using iPads and synchronize them at the beginning and ending of each shift.
3. All other functions require Wi-Fi connectivity to the hosted application; access will occur via laptop or PC from a field office.
4. The Commission will provide all end-user devices and telecommunications.
5. Approximately 400 end-users will have access to the system after final implementation.
6. Specific requirements are documented in Appendix G - Functional/Technical Requirements.
b. Phase I Requirements

The Commission envisions an iterative, collaborative process for design/develop/implement activity. The specific components of iterative deliverables will be determined while developing the detailed execution plan.
The Commission envisions releases as follows.

1. Inspection functionality

Please refer to Appendix K for Use Cases. The initial release must enable Inspectors to work in the field (Use Case 61 "Work in a Disconnected Mode") for the business functions described in Use Cases 1-12, including forms and reports. It must include associated CDS Operator functionality (most of Use Cases13-36).

It does not necessarily require System Admin Scenarios (Use Cases 37-42) or Workflow/Integration Use Cases, other than Use Case 61. The Commission intends to deploy this "beta" release as a pilot on one or more construction projects of relatively short duration (6-12 months) prior to full roll-out. Conceivably, the initial release can have baseline functionality, and a subsequent release containing functionality related to the Final Report.

Proposers may deliver the remaining functions in separate releases or a large bundled release. Required functions include:
2. Business Intelligence

This must incorporate all remaining requirements for reporting and business intelligence, i.e., reports not addressed in the previous release.
3. Full integration

This must address all integration, including the maintenance requirements cited in Appendix G Technical Requirements 26-31.
4. All remaining functions

This must address all other functions, including QA/Lab Integration and any remaining requirements not previously addressed.
5. Training and Support Documentation
a) Each release must have one or more train-the-trainer session for up to 10 users. The sessions will occur at the Commission's location in Harrisburg. Proposers are responsible for creating training material and delivering instruction.
b) The final release shall include a comprehensive user manual or electronic knowledge base. Please reference the current user manual, Appendix L- CDSme Field Office Manual, as an indication of the type of information required.
c) The final release shall include As-Built technical documentation on the software/system.

Please note: The Commission is responsible for implementation and roll-out. It will use the training and support documentation to implement the system in Phase II.
c. Phase II Requirements

Proposers must provide maintenance and support on an annual renewable basis. At its option, the Commission will renew the annual maintenance. The Commission uses ServiceNow for Information Technology Service Management (ITSM). Level 1 Service Requests and Incidents will be fielded by Commission Service Desk via user telephone, email, or web request and managed via ServiceNow; this occurs during business hours. One or more "super users" in the Engineering-Construction Department will provide Level 2 support for issues related to usability. They will escalate issues as needed. The Provider shall provide Level 3 support, described below.

During the maintenance period, the Commission requires:

1. At least one FTE developer available for support, accessible via webinar or teleconference call during business hours. The Commission requires 1,920 hours of technical support per year as a baseline. Proposer may present this as a single dedicated resource or a team of shared resources.
2. Ability to obtain additional enhancements as separate statements of work (SOW), in addition to work completed by the FTE cited above.
3. SLA for performance. This includes performance of the support team as well as hosting/uptime performance. Please refer to IV-5. Reports and Project Control.
4. Proposer must report status of any ServiceNow tickets assigned to it.

For PPP and SaaS models, Proposers must ensure that external parties (other customers) have no impact on services delivered to the Commission. The Commission requires enhancements to be delivered without external constraints.
d. Methodology

The Commission desires to leverage capabilities of mobile automation to replace the paper-centric process currently in place. During joint application development (JAD) or other design sessions, the Commission will work with the Proposer to more specifically define the future system. This will be a collaborative process. The Commission will provide work space for JAD and other
meetings. The Proposer must conduct development and other technical work at its own facility, within its own technical environment.

In addition to its own development environment(s), the Proposer must provide a QA environment; a sandbox/training environment; and a production environment for use by the Commission. The QA environment will be used for UAT and release management.

The Engineering-Construction Department has a well-defined process for conducting and documenting inspections, based on Commission business rules. It is interested in streamlining workflow to leverage technology. It does not expect Proposers to replicate current screens and reports on a one-for-one basis in the new system. The RFP includes details of Appendix K - CDS Use Cases; Appendix M - CDS Use Cases - Attachment 1 Forms and Appendix N - CDS Use Cases - Attachment 2 Reports to provide a baseline for Proposers to estimate the scope of work for the new system.

The Commission will provide experienced inspection staff to work with the Proposer's team for JAD sessions, UAT, and workflow integration. These individuals will then become key resources for roll-out and enterprise training in Phase II.
e. Warranty

The Provider must warrant the software/service for a period of 12 months. Repairs during this period must occur at no additional charge to the Commission.

## IV-4. Tasks.

Phase I
This phase has a maximum duration of two years. It is complete when (1) the selected pilot has completed a Final Inspection using the new system/service and (2) Proposer has provided all deliverables defined below.

## a. Initiating Tasks

These tasks must be completed as part of project initiation.

## 1. Project RACI

The Proposer must provide a responsible, accountable, consulted, and informed (RACI) matrix for all project deliverables.

## 2. Project WBS

The Proposer will meet with the Commission to complete the WBS submitted with the proposal. The approved WBS represents the Task Plan defined at IV-5. Reports and Project Control.

## b. Planning Tasks

The Proposer will complete the PMP, using the outline submitted with the proposal. The Commission will ensure availability of stakeholders for meetings, JAD sessions, and other life cycle tasks.

## c. Execution Tasks

The Proposer will provide iterative releases of software/functionality. Each release is a separate deliverable. Proposer may present interim deliverables, such as design
documents, specifications, etc. All deliverables must be clearly identified in the Cost Proposal.
In general, the Commission requires five work days to review/approve work products and up to 10 work days for major deliverables.

Each iteration will have a UAT of at least four weeks. The Proposer shall prepare test scripts and a test plan for each iteration and conduct at least one train-the-trainer training session.
d. Monitoring and Controlling Tasks

The Proposer will provide relevant reports defined at IV-5. Reports and Project Control.
e. Closing Tasks

The Proposer will provide the Final Report defined at IV-5. Reports and Project Control. Phase II
This phase represents remote operations and maintenance support. Deliverables include all of the following:
a. Maintenance and Support

The Proposer must support the system/service for the duration of the project. This includes technical support and minor enhancements.

The Proposer must provide additional services on an SOW basis. The Proposer must use the submitted rate card in Appendix J to develop fixed-price SOWs and implement changes using standard Release Management processes.

## b. Hosting

The Proposer must provide the hosting environment.

## c. Service Levels

The Proposer must provide an SLA for all services, metrics to be mutually negotiated.

## IV-5. Reports and Project Control.

## Phase I

a. Task Plan.

A work plan for each task that identifies the work elements of each task, the resources assigned to the task, and the time allotted to each element and the deliverable items to be produced.

## b. Status Report.

A monthly progress report covering activities, problems, and recommendations; the report should be keyed to the work plan developed by the Proposer in its proposal, as amended or approved by the Commission.

## c. Problem Identification Report.

An "as required" report, identifying problem areas. The report should describe the problem and its impact on the overall project and on each affected task. It should list possible courses of action with advantages and disadvantages of each and include Proposer recommendations with supporting rationale.

## d. Final Report.

This is the final Phase I deliverable. Proposers must create and submit for approval a final report addressing the following topics.
(1) Abstract or summarize the Phase I initiative
(2) Summarize lessons learned, including recommendations for roll-out
(3) Include relevant documentation or indicate its location

Phase II
a. Status Reports.

Proposers must prepare a semi-monthly report summarizing tasks planned and completed during the reporting period and presenting SLA metrics.

## b. Service Levels.

Proposers must provide an SLA for services delivered during Phase II. The Commission will negotiate details based on the type of contract.

## AGREEMENT

This AGREEMENT is made this $\qquad$ day of $\qquad$ , 2018, between the Pennsylvania Turnpike Commission ("COMMISSION"), an instrumentality of the Commonwealth of Pennsylvania, with principal offices at 700 South Eisenhower, Blvd., Middletown, Pennsylvania 17057 (mailing address: P. O. Box 67676, Harrisburg, PA 17106-7676);


#### Abstract

AND (name of contractor) ("CONTRACTOR"), a (state) corporation, with its principal office at (address).


## WITNESSETH:

WHEREAS, the COMMISSION desires to satisfy a need for the (name of solicitation);
WHEREAS, by Act No. 211 of the General Assembly of the Commonwealth of Pennsylvania, approved May 21, 1937, and its amendments, the COMMISSION is authorized and empowered to enter into an Agreement with the CONTRACTOR;

WHEREAS, the COMMISSION desires to retain the services of CONTRACTOR upon the following terms; and

NOW, THEREFORE, in consideration of these mutual covenants, and intending to be legally bound, the parties agree as follows:

Contractor's Scope of Work
The CONTRACTOR will perform the work described in (solicitation identification, i.e. RFP number) dated (date of solicitation), titled (Title of solicitation) and the CONTRACTOR'S proposal dated (date of contractor's proposal). These documents are made a part of this Agreement by reference.

## Commission's Responsibilities

(As defined in Section I of the RFP, "Commission Participation")
The COMMISSION shall furnish the CONTRACTOR access to key personnel, relevant documents, and adequate workspace for completing the work.

## Compensation

For the work, services, and material as defined in this Agreement, the CONTRACTOR shall be paid a not-to-exceed amount of (agreement dollar value).

The CONTRACTOR agrees that the COMMISSION may set off the amount of any state tax liability or other obligation of the CONTRACTOR or its subsidiaries to the Commonwealth against any payments due the CONTRACTOR under any contract with the COMMISSION.

## Duration of Agreement

The term of this Agreement shall be for a period of (agreement term) and shall commence on the Effective Date as defined below.

The Effective Date shall be fixed by the COMMISSION after the Agreement has been fully executed by the CONTRACTOR and by the COMMISSION, and after all approvals required by the COMMISSION contracting procedures have been obtained.

This Agreement will not terminate until the COMMISSION accepts all work as complete and tenders final payment to the CONTRACTOR.

## Termination

Either party may terminate this Agreement at any time upon thirty- (30) calendar days written notice. If this notice is given, the CONTRACTOR shall be paid only for the services already rendered upon the date of the notice and for the services rendered to the date of termination, subject to all provisions of this Agreement. The notice will be effective on the date of receipt. The right to cancel may be exercised as to the entire project, or as to any particular phase or phases, part or parts, and upon one or upon several occasions, but any termination may not be revoked except upon written consent of the parties through a supplemental Agreement to this Agreement.

## Insurance

The CONTRACTOR, prior to execution of this Agreement, shall furnish to the COMMISSION the certificates of insurances as required in attached Exhibit " $\mathbf{X}$ " and made a part of this Agreement.

## Diverse Business (DB) Requirements

The CONTRACTOR agrees to comply with the requirements set forth in the COMMISSION'S DB Requirements - Exhibit X, attached and made part of this Agreement. In particular, the CONTRACTOR agrees to comply with section (d) Consultant Requirements During Performance of Services.

## Assignment and Delegation

The CONTRACTOR may not transfer, assign, or delegate any terms of this Agreement, in whole or in part, without prior written permission from the COMMISSION.

The CONTRACTOR shall not engage the services of any person or persons currently employed by the COMMISSION, except with the COMMISSION's approval.

The CONTRACTOR shall neither assign this contract, in part or in whole, nor the right to any monies due it under this Agreement. Any part of the work to be done or material furnished under the contract shall not be sublet except to those firms indicated as part of the team in the initial Proposal, without the COMMISSION's prior consent in the form of a letter signed by the Department Head (update accordingly).

## Governing Law

This Agreement will be interpreted according to the laws of the Commonwealth of Pennsylvania.

## Observance of Laws

The CONTRACTOR agrees to observe all relevant federal, state, and local laws and to obtain in its name all necessary permits and licenses.

Work for Hire
Except for hardware, third party licensed software, and software previously developed by CONTRACTOR, all Deliverables, including but not limited to source code, software, specifications, plans, designs and engineering, drawings, data, information or other written, recorded, photographic, or visual materials, trademarks, service marks, copyrights or other Deliverables produced by CONTRACTOR or any supplier in the performance of this Agreement shall be deemed "Work Product". All Work Product shall be considered services for hire. Accordingly, except as set forth earlier in this paragraph, all Work Product shall be the exclusive property of the COMMISSION.

The CONTRACTOR agrees to notify the COMMISSION in writing before using any of CONTRACTOR's previously developed software for services provided under this Agreement.
The CONTRACTOR and the COMMISSION will honor all applicable preexisting licenses, copyrights, trademarks, service marks, and patents. If as part of an expense item under this Agreement, the CONTRACTOR purchases the right to any license, the agreements for the use or ownership of such license will be placed in the name of the COMMISSION along with all other rights and obligations. In addition, the CONTRACTOR will mark all COMMISSION content or previously unprotected work product designated by the COMMISSION with a notice as follows: "Pennsylvania Turnpike Commission, (Year)".

## Audit/Retention of Records

CONTRACTOR and its subcontractors shall maintain books and records related to performance of this Agreement or subcontract and necessary to support amounts charged to the COMMISSION in accordance with applicable law, terms and conditions of this Agreement, and generally accepted accounting practice. CONTRACTOR shall maintain these books and records for a minimum of three (3) years after the completion of the Agreement, final payment, or completion of any contract, audit or litigation, whichever is later. All books and records shall be available for review or audit by the COMMISSION, its representatives, and other governmental entities with monitoring authority
upon reasonable notice and during normal business hours. CONTRACTOR agrees to cooperate fully with any such review or audit. If any audit indicates overpayment to CONTRACTOR, or subcontractor, the COMMISSION shall adjust future or final payments otherwise due. If no payments are due and owing to CONTRACTOR, or if the overpayment exceeds the amount otherwise due, CONTRACTOR shall immediately refund all amounts which may be due to the COMMISSION. Failure to maintain the books and records required by this Section shall establish a presumption in favor of the COMMISSION for the recovery of any funds paid by the COMMISSION under this Agreement for which adequate books and records are not available to support the purported disbursement.

## Dispute Resolution

All questions or disputes regarding any matter involving this Agreement or its breach shall be referred to the Board of Claims of the Commonwealth of Pennsylvania pursuant to 62 Pa.C.S.A. § 1701 et seq. If the Board of Claims either refuses or lacks jurisdiction, these questions or disputes shall proceed as provided in 42 Pa.C.S.A. § 7301 et seq. (Statutory Arbitration).

The panel of arbitrators will consist of a representative of each of the parties and a third party chosen by the representatives, or if the representatives are unable to choose, by the American Arbitration Association.

## Indemnification

The CONTRACTOR shall be responsible for, and shall indemnify, defend, and hold harmless the COMMISSION and its Commissioners, officers, employees, and agents from any claim, liability, damages, losses, causes of action, and expenses, including reasonable attorneys' fees, arising from damage to life or bodily injury or real or tangible personal property caused by the negligence or other tortious acts, errors, and omissions of CONTRACTOR, its employees, or its subcontractors while engaged in performing the work of this Agreement or while present on the COMMISSION's premises, and for breach of this Agreement regarding the use or disclosure of proprietary and confidential information where it is determined that CONTRACTOR is responsible for any use of such information not permitted by this Agreement. The indemnification obligation shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for Contractor or its subcontractors under Workmen's Compensation Acts, Disability Benefits Acts, or other Employee Benefit Act.

## Data/Information Security Breach Notification

"Breach" shall mean any successful unauthorized acquisition, access, use, or disclosure of COMMISSION data that compromises the security or privacy of such data.
"Commission Data" means COMMISSION provided information and COMMISSION related information acquired as a result of the services provided to COMMISSION under this Agreement.

CONTRACTOR shall report to the COMMISSION any Breach affecting COMMISSION Data.

The notice to be provided to the COMMISSION by CONTRACTOR shall be provided without unreasonable delay and no later than within 48 hours of CONTRACTOR's discovery of any Breach. A Breach shall be deemed to be discovered on the first day on which the CONTRACTOR knows or reasonably should have known of the Breach. The notice to be provided to the COMMISSION by CONTRACTOR shall be made in writing to the COMMISSION's Information Security Officer and shall include the following content: (i) the nature of the Breach; (2) the specific Commission Data affected by the Breach; (3) the steps the CONTRACTOR is taking to remediate the Breach; and (4) steps the CONTRACTOR is taking to mitigate future Breaches. Following notification of the Breach, CONTRACTOR shall cooperate with the COMMISSION's investigation of the Breach and provide any other information regarding the Breach or the Commission Data affected which the COMMISSION may reasonably request. Should notice to individuals whose information was part of Commission Data be required under any applicable data privacy law, including, but not limited to, individual state data breach notice laws or federal laws such as HIPAA and Graham Leach Bliley Act, CONTRACTOR shall provide the COMMISSION with copies of any template notification letters and draft regulatory correspondence for COMMISSION's prior approval. CONTRACTOR shall provide any notifications required under the applicable data privacy laws on behalf of the COMMISSION at the request of COMMISSION. The COMMISSION reserves the right to handle any notifications required and shall notify CONTRACTOR if the COMMISSION will be handling the required notifications. Upon request, CONTRACTOR shall provide the COMMISSION with its cyber-security policies and procedures. CONTRACTOR agrees to reimburse the COMMISSION for any and all reasonable costs associated with the COMMISSION's response to CONTRACTOR's Breach, including any fees associated with the COMMISSION's investigation of CONTRACTOR's Breach, notification costs, and any reasonable offer of credit or identity monitoring product.

## Security Requirements

The Security Requirements are attached as [Exhibit X] and made a part of this Agreement.

## Contractor Integrity Provisions

The Contractor Integrity Provisions are attached as Exhibit X and made a part of this Agreement.

## Confidentiality Provisions

1. As a consequence of the performance of its duties with the COMMISSION, CONTRACTOR may learn, be given, or become aware of certain information, including, but not limited to, matters pertaining to internal communications, information, proprietary information, individually identifiable health information, trade practices, business operations, or other sensitive information collectively known as Confidential Information. Regardless of how transmitted or received by CONTRACTOR, whether by receipt, sending, or merely becoming available to CONTRACTOR through its relationship to the COMMISSION, CONTRACTOR agrees to maintain and treat as proprietary and confidential to the COMMISSION all such Commission Confidential Information, and shall not discuss, reveal, or use for any purpose outside the performance of its contract with the COMMISSION such Commission Confidential Information.

Confidential Information shall not include any information that (i) is or becomes available to the public other than as a consequence of a breach by any individual, a partnership, a corporation, an association, a limited liability company, a joint stock company, a trust, a joint venture, an unincorporated organization (each a "Person") of any fiduciary duty or obligation of confidentiality, including, without limitation, catalogues, publications, product descriptions and sales literature that the COMMISSION has distributed to the public generally; or (ii) information which at the time of disclosure to the CONTRACTOR is in the public domain; or (iii) is disclosed as required by a final, unappealable court order and no suitable protective order, or equivalent remedy, is available, or (iv) the CONTRACTOR was aware of prior to its disclosure to the CONTRACTOR by the COMMISSION from a source not bound by a confidential obligation and the CONTRACTOR provides the COMMISSION written notice of such fact prior to the execution of this Agreement or promptly upon the CONTRACTOR's learning that the information was Confidential Information; or (v) information which the CONTRACTOR can demonstrate with competent written evidence was independently developed by or for the CONTRACTOR without use of or reliance on the Confidential Information.
2. With respect to its employees, CONTRACTOR agrees to:
a) require all of its employees to maintain such confidentiality;
b) take appropriate action against its employees, officers, and subcontractors for any and all violations of this Agreement.
3. With respect to any subcontractors that CONTRACTOR wishes to employ to perform any of its obligations under any agreement with the COMMISSION, CONTRACTOR agrees to require any such approved subcontractor to execute written confidentiality agreements that require each such CONTRACTOR and its employees to comply with all the requirements set forth above.
4. CONTRACTOR agrees that any breach of these Confidentiality Provisions may result in civil and/or criminal penalties, for CONTRACTOR, its officers and employees, and subcontractors.
5. Notwithstanding any other provision to the contrary, CONTRACTOR agrees that these provisions shall survive the termination of this and any and all agreements between the CONTRACTOR and the COMMISSION.
6. CONTRACTOR agrees to treat the information in the same way CONTRACTOR treats its own most confidential information and to inform each such person of these provisions.
7. CONTRACTOR agrees to immediately notify the COMMISSION of any information which comes to its attention which does or might indicate that there has been any loss of confidentiality or information.
8. CONTRACTOR shall return to the COMMISSION upon demand any and all Confidential Information entrusted to it by the COMMISSION pursuant to this Agreement (including any and all copies, abstracts, compilations or analyses thereof and memoranda related thereto or incorporating the Confidential Information) or the CONTRACTOR may request permission from
the COMMISSION, which permission may be granted or denied in the COMMISSION's sole discretion, to destroy all such Confidential Information and provide a certificate of destruction to the COMMISSION signed by the CONTRACTOR. The CONTRACTOR further agrees that neither itself nor its employees or representatives will copy, in whole or in part, any such Confidential Information without the prior written consent of the COMMISSION.
9. CONTRACTOR agrees that if they have had or will have an SSAE16 audit that they will comply with and abide by the findings of such audit to protect COMMISSION information.

## Use of Unmanned Aircraft Systems: (remove if not applicable to this Agreement)

The CONTRACTOR shall not use or operate Unmanned Aircraft Systems (UAS) without the express written approval of the COMMISSION. Such approval shall be determined upon review and authorization of a written request from the CONTRACTOR by the COMMISSION's Legal Department and UAS program managers. If approved, the CONTRACTOR shall execute a separate Authorization to Operate UAS or other applicable third-party agreement prepared by the COMMISSION's Legal Department setting forth the necessary indemnification, release and insurance requirements. The Authorization shall define the requirements the CONTRACTOR must follow in order to operate UAS within COMMISSION right-of-way and property. All approved UAS operations shall be conducted using Small Unmanned Aircraft Rule (Part 107) (14 CFR Part 107) of the Federal Aviation Administration (FAA) Regulations.

## Entire Agreement

This Agreement, together with any writings either attached as exhibits or incorporated by reference, constitutes the entire understanding between the parties and there are no other oral or extrinsic understandings of any kind between the parties.

## Modification

This Agreement may be modified only by a writing signed by both parties.
[SIGNATURES ARE SET FORTH ON THE NEXT PAGE]

IN WITNESS WHEREOF, the Pennsylvania Turnpike Commission and (Contractor Name) have executed this Agreement by their duly authorized officers on the date written above.

## ATTEST:

| Ann Louise Edmunds Date  <br> Leslie S. Richards <br> Assistant Secretary-Treasurer   <br> Chair   | Date |
| :--- | :--- | :--- | :--- |

APPROVED AS TO FORM AND LEGALITY:

| Albert C. Peters II Date <br> General Litigation \& Contracts Counsel  |  | Date |
| :--- | :--- | :--- |
|  |  |  |
| ATTEST: | (Contractor Name) |  |

Signature___ $\qquad$
Date
Name $\qquad$
Title $\qquad$ -
(Contractor Name)

Signature $\qquad$ Date

Name $\qquad$
Title $\qquad$

Federal Tax ID No. $\qquad$

## CONTRACTOR INTEGRITY PROVISIONS

It is essential that those who seek to contract with the Pennsylvania Turnpike Commission ("Commission") observe high standards of honesty and integrity. They must conduct themselves in a manner that fosters public confidence in the integrity of the Commission contracting and procurement process.
I. DEFINITIONS. For purposes of these Contractor Integrity Provisions, the following terms shall have the meanings found in this Section:
a. "Affiliate" means two or more entities where (a) a parent entity owns more than fifty percent of the voting stock of each of the entities; or (b) a common shareholder or group of shareholders owns more than fifty percent of the voting stock of each of the entities; or (c) the entities have a common proprietor or general partner.
b. "Consent" means written permission signed by a duly authorized officer or employee of the Commission, provided that where the material facts have been disclosed, in writing, by prequalification, bid, proposal, or contractual terms, the Commission shall be deemed to have consented by virtue of the execution of this contract.
c. "Contractor" means the individual or entity, that has entered into this contract with the Commission, and "Contractor Related Parties" means any affiliates of the Contractor and the Contractor's executive officers, Pennsylvania officers and directors, or owners of $5 \%$ or more interest in the Contractor
d. "Financial Interest" means either:
i. Ownership of more than a five percent interest in any business; or
ii. Holding a position as an officer, director, trustee, partner, employee, or holding any position of management.
e. "Gratuity" means tendering, giving, or providing anything of monetary value including, but not limited to, cash, travel, entertainment, gifts, meals, lodging, loans, subscriptions, advances, deposits of money, services, employment, or contracts of any kind. See Commission Policy 3.10, Code of Conduct.
f. "Non-bid Basis" means a contract awarded or executed by the Commission with Contractor without seeking bids or proposals from any other potential bidder or offeror.
II. In furtherance of this policy, Contractor agrees to the following:

1. Contractor shall maintain the highest standards of honesty and integrity during the performance of this contract and shall take no action in violation of state or federal laws or regulations or any other applicable laws or regulations, or other requirements applicable to Contractor or that govern contracting or procurement with the Commission.
2. Contractor shall establish and implement a written business integrity policy, which includes, at a minimum, the requirements of these provisions as they relate to Contractor activity with the Commission and Commission employees and which is made known to all Contractor employees. Posting these Contractor Integrity Provisions conspicuously in easily-accessible and well-lighted places customarily frequented by employees and at or near where the contract services are performed shall satisfy this requirement.
3. Contractor, its affiliates, agents, employees and anyone in privity with Contractor shall not accept, agree to give, offer, confer, or agree to confer or promise to confer, directly or indirectly, any gratuity or pecuniary benefit to any person, or to influence or attempt to influence any person in violation of the Public Official and Employees Ethics Act, 65 Pa.C.S. §§1101 et seq.; the State Adverse Interest Act, 71 P.S. §776.1 et seq.; Commission Policy 3.10, Code of Conduct or in violation of any other federal or state law in connection with performance of work under this contract, except as provided in this contract.
4. Contractor shall not have a financial interest in any other contractor, subcontractor, or supplier providing services, labor, or material under this contract, unless the financial interest is disclosed to the Commission in writing and the Commission consents to Contractor's financial interest prior to Commission execution of the contract. Contractor shall disclose the financial interest to the Commission at the time of bid or proposal submission, or if no bids or proposals are solicited, no later than Contractor's submission of the contract signed by Contractor.
5. Contractor certifies to the best of its knowledge and belief that within the last five (5) years Contractor or Contractor Related Entities have not:
a. been indicted or convicted of a crime involving moral turpitude or business honesty or integrity in any jurisdiction;
b. been suspended, debarred or otherwise disqualified from entering into any contract with any governmental agency;
c. had any business license or professional license suspended or revoked;
d. had any sanction or finding of fact imposed as a result of a judicial or administrative proceeding related to fraud, extortion, bribery, bid rigging, embezzlement, misrepresentation or anti-trust; and
e. been, and is not currently, the subject of a criminal investigation by any federal, state or local prosecuting or investigative agency and/or civil anti-trust investigation by any federal, state or local prosecuting or investigative agency.

If Contractor cannot so certify to the above, then it must submit along with its bid, proposal or contract a written explanation of why such certification cannot be made and the Commission will determine whether a contract may be entered into with the Contractor. The Contractor's obligation pursuant to this certification is ongoing from and after the effective date of the contract through the termination date thereof. Accordingly, the Contractor shall have an obligation to immediately notify the Commission in writing if at any time during the term of the contract if becomes aware of any event which would cause the Contractor's certification or explanation to change. Contractor acknowledges that the

Commission may, in its sole discretion, terminate the contract for cause if it learns that any of the certifications made herein are currently false due to intervening factual circumstances or were false or should have been known to be false when entering into the contract.
6. Contractor shall comply with the requirements of the Lobbying Disclosure Act ( 65 Pa.C.S. $\S 13 A 01$ et seq.) regardless of the method of award. If this contract was awarded on a Nonbid Basis, Contractor must also comply with the requirements of the Section 1641 of the Pennsylvania Election Code (25 P.S. §3260a).
7. When Contractor has reason to believe that any breach of ethical standards as set forth in law, Commission Policy 3.10, Code of Conduct, or these Contractor Integrity Provisions has occurred or may occur, including but not limited to contact by a Commission officer or employee which, if acted upon, would violate such ethical standards, Contractor shall immediately notify the Commission contracting officer or the Chief Compliance Officer in writing.
8. Contractor, by submission of its bid or proposal and/or execution of this contract and by the submission of any bills, invoices or requests for payment pursuant to the contract, certifies and represents that it has not violated any of these Contractor Integrity Provisions in connection with the submission of the bid or proposal, during any contract negotiations or during the term of the contract, to include any extensions thereof. Contractor shall immediately notify the Commission in writing of any actions for occurrences that would result in a violation of these Contractor Integrity Provisions. Contractor agrees to reimburse the Commission for the reasonable costs of investigation incurred by the Chief Compliance Officer for investigations of the Contractor's compliance with the terms of this or any other agreement between the Contractor and the Commission that results in the suspension or debarment of the Contractor. Contractor shall not be responsible for investigative costs for investigations that do not result in the Contractor's suspension or debarment.
9. Contractor shall cooperate with the Chief Compliance Officer in investigating any alleged Commission agency or employee breach of ethical standards and any alleged Contractor non-compliance with these Contractor Integrity Provisions. Contractor agrees to make identified Contractor employees available for interviews at reasonable times and places. Contractor, upon the inquiry or request of the Chief Compliance Officer, shall provide, or if appropriate, make promptly available for inspection or copying, any information of any type or form deemed relevant by the Chief Compliance Officer to Contractor's integrity and compliance with these provisions. Such information may include, but shall not be limited to, Contractor's business or financial records, documents or files of any type or form that refer to or concern this contract. Contractor shall incorporate this paragraph in any agreement, contract or subcontract it enters into in the course of the performance of this contract/agreement solely for the purpose of obtaining subcontractor compliance with this provision. The incorporation of this provision in a subcontract shall not create privity of contract between the Commission and any such subcontractor, and no third party beneficiaries shall be created thereby.
10. For violation of any of these Contractor Integrity Provisions, the Commission may terminate this and any other contract with Contractor, claim liquidated damages in an
amount equal to the value of anything received in breach of these Provisions, claim damages for all additional costs and expenses incurred in obtaining another contractor to complete performance under this contract, and debar and suspend Contractor from doing business with the Commonwealth. These rights and remedies are cumulative, and the use or non-use of any one shall not preclude the use of all or any other. These rights and remedies are in addition to those the Commission may have under law, statute, regulation, or otherwise.

Appendix B, RFP \# 19-40120-8569, Multi-Platform Construction Documentation System (CDS)

| Proposer Questions |  |  | Pennsylvania Turnpike Commission (PTC) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Proposer Name: |  |  |
| \# | Page | Section | Section Description | Proposer Question | Commission Response |
|  |  |  |  |  |  |
| 1. |  |  |  |  |  |
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## APPENDIX C - PROPOSAL COVER SHEET <br> Pennsylvania Turnpike Commission Multi-Platform Construction Documentation System (CDS)

RFP\# 19-40120-8569
Enclosed in three separately sealed submittals is the proposal for the Proposer identified below for the above referenced RFP:

| Proposer Information: |  |
| :--- | :--- |
| Proposer Company Name |  |
| Proposer Mailing Address |  |
| Proposer Website |  |
| Proposer Contact Person/Title |  |
| Contact Person's Phone Number |  |
| Contact Person's Fax Number |  |
| Contact Person's Email Address |  |
| Proposer Federal ID Number |  |
| Location of Headquarters |  |
| Location of Office(s) Performing <br> the Work |  |
| Listing of all Pennsylvania <br> offices and Total Number of <br> Pennsylvania Employees |  |

Submittals Enclosed and Separately Sealed:

| $\square$ Technical Submittal $\square$ Diverse Business Participation Submittal $\square$ Cost Submittal |
| :--- |
| $\quad$ Signature |
| Signature of an official authorized |
| to bind the Proposer to the provisions |
| contained in the Proposer's proposal: |
| Print Name |
| Title |

An official authorized to bind the Proposer to its provisions must sign the proposal. If the official signs this Proposal Cover Sheet and the Proposal Cover Sheet is attached to the proposal, the requirement will be met.

## General Security Requirements

| Vendor shall supply all hosting equipment (hardware and software) required for performance of the |
| :--- |
| contract and ensure maintenance and replacement as necessary to maintain compliance with the |
| Service Level Agreement(s). |
| The vendor shall warrant all system/software to be delivered free of malware or other malicious or <br> destructive code. |
| In the event of adverse risk findings through an audit or assessment, the vendor shall cooperate with |
| the Commission in remediating any risks to the system, including complying with requests to |
| temporarily take the system offline or otherwise limit access to the system during remediation if |
| warranted. |
| Vendors must have a plan for compliance with all applicable breach notification laws, including <br> Pennsylvania's Breach of Personal Information Notification. |
| The Commission must be notified in writing within 72 hours of the earliest indication or report of a <br> potential breach or unintended disclosure of confidential information. <br> Incident response actions that may affect confidential information must be conducted quickly and <br> with ample resources. Vendor must hire a professional third-party incident response team if its <br> inhouse resources do not have sufficient skill or availability. <br> The Commission shall have the right to view all incident response evidence, reports, communications, <br> and related materials, affecting Commission systems, upon request. <br> If requested by the Commission, or if required by law, the vendor, at its own cost and expense, shall <br> notify in writing all persons affected by the incident. <br> The vendor is responsible for hardening all devices to run only the services required to support the <br> application. All unnecessary services must be disabled (for example, UPnP, SLP, etc.). <br> If Commission user service disruptions are expected, the change must be approved by the Change <br> Review Board (CRB) before implementation. <br> No generic user accounts for shared resources will be permitted. <br> Audit logs must be implemented for all systems. All actual or attempted violations of system security <br> must generate an audit log. Audit logs must be secured against unauthorized access or modification. <br> All account credentials (username/password) must be encrypted during transmission. <br> All administrator account passwords and SNMP community strings must be changed from the <br> manufacturer's default values to a hardened value. |

APPENDIX D - RFP 19-40120-8569

## Hosted/Cloud-Based Security Requirements

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The Commission's data must be located and remain within the continental United States.
Vendor shall use commercially reasonable resources and efforts to maintain adequate internet
connection bandwidth, service capacity, and ensure its data center and/or other vendors performing
subcontracted services have industry standard physical, technical, human, and administrative
controls.
Vendor shall house all services and equipment in an operational environment that meets industry
standards including climate control, fire and safety hazard detection, redundancy, electrical needs,
and physical security.
If Commission employee access is required, then the latest version of ADFS (Active Directory Federated Services), using the latest version of SAML, must be used for authentication and authorization, and the Identity Source must be either the Commission's on-premise ADFS installation or the Commission's Azure AD instance.
When SAML authentication is used for cloud-hosted systems, the vendor must use Provider-side Initiated authentication.
```

All cloud-based/hosted systems using HTTPS, or any other protocol using SSL/TLS, must use TLS 1.2 or later with a key size no smaller than 2048 bits.
For public-facing systems, the vendor shall utilize a third-party certificate provider who is a recognized and trusted authority in the industry.
The vendor is responsible for sending the Commission system/network vulnerability scan results upon request.
The vendor will supply firewall and IPS logs for malicious intrusion and access attempts into hosted Commission systems upon request.
Vendors must have, and upon request by the Commission, shall provide copies of its information security policies that cover the following elements:

- Data classification and privacy
- Security training and awareness
- Systems administration, patching, and configuration
- Application development and code review
- Incident response
- Workstation management, mobile devices, and antivirus
- Backups, disaster recovery, and business continuity
- Regular audits and testing
- $\quad$ Requirements for third-party business partners and contractors
- $\quad$ Compliance with information security or privacy laws, regulations, or standards

The vendor shall allow the Commission, or an agreed upon third party, to perform security assessments, vulnerability assessments, or audits of systems that contain Commission data. For systems hosted off the Commission's network, an industry-accepted endpoint protection solution must be operated on all hosting servers.

## On-Prem/Physically-Connected Security Requirements

The Commission's IT Security Team must be allowed to scan, for security vulnerabilities, any new equipment and/or changes to existing equipment before implementation.
The Commission's IT Security team must be given administrator-level access to all installed equipment for incident response and security assessment.
All Microsoft Windows-based systems, connected to the Commission's network, will be joined to the Commission's Active Directory domain and will be patched by the Commission's IT staff on a monthlybasis at a minimum.
The vendor is responsible for updating all non-Windows systems, not operated or administered by the Commission, to the vendors' latest recommended level.
If remote access is needed, the vendor must use HorizonView. If using VPN for remote access, a Commission owned and managed device is required.
If local connectivity to the Commission's network is needed, a Commission-owned and managed device is required. Vendor-owned devices are not permitted to be connected to the network.
The vendor's system/software must co-exist with all industry accepted endpoint software with no exceptions.
The vendor must provide the necessary directory and file exclusions to allow the system/software to operate as intended.

## Document History

Below is a document history log which includes the changes that were made to this document, which team member made the changes, and the dates of the changes. The first published version of the document is version 1.0. Subsequent updates to the document will be numbered v1.1, v1.2, v1.3, etc. Any significant changes (i.e., the addition of a new section or the removal of an existing section) will be numbered v2.0, v3.0, etc.

| Version | Date | Author | Revision Descriptions |
| :---: | :---: | :--- | :--- |
| 1.0 | $02 / 01 / 2019$ | Mike Wydra | Original Published Version |
| 1.1 | $06 / 01 / 2019$ | Mike Wydra | Additions to the 'General Security <br> Requirements' section of the appendix: <br> • All default passwords must be <br> changed to a hardened value. <br> All account credentials <br> (username/password) must be <br> encrypted during transmission. |
| Modifications to the 'Hosted/Cloud-Based <br> Security Requirements' section: |  |  |  |



## The Pennsylvania Turnpike Commission

Before starting any work and until completion and final payment is made for the work, or final acceptance of the work, the Proposer will provide and maintain the following minimum levels of insurance at Proposer's own expense. Proposer shall furnish Certificates of Insurance showing the effective date of coverage as outlined below. No work may be performed until the required evidence of Insurance is provided in accordance with the terms of the contract. Proposer shall be responsible for ensuring that all Subcontractors hired by the Proposer are properly insured. Proposer shall not permit any such Subcontractors to start work until such evidence has been provided to the Proposer.
a) All insurance shall be procured from insurers permitted to do business in the State in which the project is taking place and having an A.M. Best Rating of at least "A-, Class VIII".
b) Proposer shall not have a Self-Insured Retention (SIR) on any policy greater than $\$ 50,000$, which is the responsibility of the Proposer. If Proposer's policy(ies) has a Self-Insured Retention exceeding this amount, approval must be received from the Commission prior to starting work. In the event any policy includes an SIR, the Proposer is responsible for payment within the SIR of their policy(ies) and the Additional Insured requirements specified herein shall be offered within the SIR amount(s).
c) All insurance required herein, except for Professional Liability Insurance, shall be written on an "occurrence" basis.
d) The Proposer's insurance carrier(s) shall agree to provide at least thirty (30) days prior written notice to the Commission in the event coverage is canceled or nonrenewed, unless cancellation is for non-payment of premium. In the event of cancellation or non-renewal of coverage(s) for any reason, it is the Proposer's responsibility to replace coverage to comply with the Contract requirements so there is no lapse of coverage for any time period.

If the insurance carriers will not issue or endorse their policy(s) to comply with the above, it is the responsibility of the Proposer to report any notice of cancellation or non-renewal at least thirty (30) days prior to the effective date of this notice.
e) Proposer shall provide the Commission with Certificates of Insurance, showing the insurance coverages listed below, ten days prior to the start of work of this Project and thereafter upon renewal or replacement of each coverage. The Proposer shall not begin any work until the Commission has reviewed and approved the Certificate of Insurance.

Failure of the Commission to demand such certificate or other evidence of full compliance with these insurance requirements or failure of the Commission to identify a deficiency from evidence that is provided shall not be construed as a waiver of Proposer's obligation to maintain such insurance.

## The Pennsylvania Turnpike Commission

Upon completion of the contract, an additional certificate(s) of insurance evidencing coverage shall be provided to the Commission with final application for payment.
f) The Commission, and its Commissioners, officers, employees and agents shall be added as ADDITIONAL INSUREDS on all required liability policies (except Workers' Compensation and Professional Liability) for ongoing operations and completed operations on a primary noncontributory basis.

There shall be no "Insured versus Insured Exclusion" on any policies; all policies will provide for "cross liability coverage".
g) Waiver of Rights of Subrogation: Proposer shall waive all rights of recovery against the Commission and all the additional insureds for loss or damage covered by any of the required insurance (except Professional Liability).
h) The amount of insurance in the required coverages shall not be construed to be a limitation of the liability on the part of the Proposer.
i) The carrying of insurance described below shall in no way be interpreted as relieving the Proposer of any responsibility or liability under the contract.
j) Any type of insurance or any increase in limits of liability which the Proposer requires for its own protection or on account of statute shall be its own responsibility and at its own expense.
k) Proposer shall promptly notify the Commission and the appropriate insurance company(ies) in writing of any accident(s) as well as any claim, suit or process received by the insured Proposer arising in the course of operations under the contract. The Proposer shall forward such documents received to its insurance company(ies), as soon as practicable, or as required by its insurance policy(ies).

## REQUIRED COVERAGES - the following may be provided through a combination of primary and excess policies in order to meet the minimum limits set forth below:

## 1. Workers' Compensation and Employer's Liability:

Provided in the State in which the work is to be performed and elsewhere as may be required and shall include:
a) Workers' Compensation Coverage: Statutory Requirements
b) Employers Liability Limits not less than:

Bodily Injury by Accident:
Bodily Injury by Disease:
Bodily Injury by Disease:
\$500,000 Each Accident \$500,000 Each Employee \$500,000 Policy Limit
c) Includes sole proprietorships and officers of corporation if performing the work.

## The Pennsylvania Turnpike Commission

2. Commercial General Liability:

Provided on standard ISO forms or an equivalent form including Premises - Operations, Independent Proposers, Products/Completed Operations, Broad Form Property Damage, Contractual Liability, and Personal Injury and Advertising Injury.
a) Occurrence Form with the following minimum limits:
(1) General Aggregate: $\$ 2,000,000$
(2) Products/Completed Operations

Aggregate: $\$ 2,000,000$
(3) Each Occurrence: \$1,000,000
(4) Personal and Advertising Injury: \$1,000,000
3. Automobile Liability:
a) Coverage to include All Owned, Hired and Non-Owned Vehicles (or "Any Auto"). If Proposer does not have any Owned Vehicles, Proposer is still required to maintain coverage for Hired and Non-Owned Vehicles as either a stand-alone policy or endorsed onto the Commercial General Liability policy above
b) Minimum per Accident Combined Single Limit \$1,000,000

## 4. Commercial Umbrella Liability:

a) Policy(ies) to apply on a Following Form Basis of the following:
(1) Commercial General Liability,
(2) Automobile Liability, and
(3) Employers Liability Coverage.
b) Minimum Limits of Liability

Occurrence Limit: \$4,000,000
Aggregate Limit (where applicable): $\quad \$ 4,000,000$
5. Professional Liability:
a) The definition of "Covered Services" shall include the services required in the scope of this contract.
b) Minimum Limits of Liability:

Per Claim: $\quad \$ 2,000,000$
Aggregate: \$2,000,000
c) If the policy is issued on a claims-made form, the following requirements will apply:

1. The retroactive date must be on or before the start of work under this contract;
2. In the event of policy termination, cancellation or non-renewal, the Proposer must purchase "tail coverage/an extended reporting period" or maintain coverage for a period of three (3) years after the completion of their work/final payment.

## The Pennsylvania Turnpike Commission

6. Network Security and Privacy Liability:
a) Proposer shall maintain the following coverage including but not limited to:
(1) Network Security Liability for third party liability arising out of hacking, network system intrusions, unauthorized access/use to data or systems, distribution of malicious code, denial of service and cyber extortion.
(2) Privacy Liability for third party liability arising out of breach of privacy, inclusive of confidential and proprietary business information, HIPAA violations and other breaches of personally identifiable information and /or protected health information that may arise from their work with this contract.
b) Minimum Limits of Liability Loss:

Per Claim:
\$2,000,000
Aggregate:
\$2,000,000
c) Minimum Limits of Liability:

Privacy Breach Notification and Credit Monitoring: \$2,000,000 Per Occurrence

APPENDIX F - RFP 19-40120-8569
Pennsylvania Turnpike Commission DIVERSE BUSINESS (DB) REQUIREMENTS

Diverse Business Participation. The Commission is committed to Diverse Business (DB) participation on competitive contracting opportunities. Firms or entities that have not previously performed work or provided services to the Commission are encouraged to respond to the solicitations. RFPs may include DB participation as part of the criteria for the evaluation of proposals, and the Commission may consider DB participation as a selection factor.

Minimum Participation Level (MPL). The minimum participation level (MPL) for the inclusion of DBs will be established in the RFP/advertisement as a percentage.
(a) General Requirements. Section 303 of Title 74 of the Pennsylvania Consolidated Statutes, 74 Pa.C.S. § 303, requires proposer on contracts funded pursuant to the provisions of Title 74 (Transportation) and 75 (Vehicle Code) administered and issued by the Commission to make Good Faith Efforts to solicit subonsultants that are Diverse Businesses (DBs) as defined in Section 303. The DB requirements of Section 303 apply to this contract.

Section 303 requires proposers to make Good Faith Efforts, as described below, to solicit subconsultants that are DBs during the proposal process to maximize participation of DBs in competitive contracting opportunities.

The Commission is committed to participation by DBs and will enforce the requirements of Section 303 and this section. Failure to make Good Faith Efforts and demonstrate such Good Faith Efforts in the solicitation of subconsultants may result in the proposer being declared ineligible for the contract.

Proposers shall document and submit to the Commission all Good Faith Efforts, as described in this section, to solicit subconsultants that are DBs during the solicitation process.

Proposers are encouraged to utilize and give consideration to consultants offering to utilize DBs in the selection and award of contracts.

Proposers shall not discriminate on the basis of gender, race, creed or color in the award and performance of contracts in accordance with 62 Pa.C.S. §3701.

Failure to comply with the requirements of Section 303 or this specification may result in the imposition of sanctions as appropriate under section 531 of the Procurement Code, 62 Pa.C.S.§ 531 relating to debarment and suspension.

The Commission's Director of the Office of Diversity and Inclusion, or designee, is designated the Responsible Official who shall supervise the DB program and ensure that the Commission complies with the DB program.
(b) Definitions. The following definitions apply to terms used in this specification:

1. Disadvantaged Business - A business that is owned or controlled by a majority of persons, not limited to members of minority groups, who are subject to racial, social, ethnic prejudice or cultural bias.
2. Diverse Business - A disadvantaged business, minority-owned or women-owned business or service-disabled veteran-owned or veteran-owned small business that has been certified by a third-party certifying organization.
3. Minority-owned Business - A business owned and controlled by a majority of individuals who are African Americans, Hispanic Americans, Native Americans, Asian Americans, Alaskans or Pacific Islanders.
4. Professional Services - An industry of infrequent, technical or unique functions performed by independent contractors or consultants whose occupation is the rendering of the services, including: (1) design professional services as defined in 62 Pa.C.S.§ 901 (relating to definitions); (2) legal services; (3) advertising or public relations services; (4) accounting, auditing or actuarial services; (5) security consultant services; (6) computer and information technology services; and (7) insurance underwriting services.
5. Pro Forma Effort-The act of completing a form or document identifying efforts to solicit DBs for a project in order to satisfy criteria with little or no expectation that the DBs contacted or identified will perform any of the work.
6. Service-Disabled Veteran-Owned Small Business - A business in the United States which is independently owned and controlled by a service-disabled veteran(s), not dominant in its field of operation, and employs 100 or fewer employees.
7. Subconsultant- Any individual, partnership, firm, or corporation entering into a contract with the prime consultant for work under the contract, including those providing professional and other services.
8. Third-party Certifying Organization - An organization that certifies a small business, minority-owned business, women-owned business or veteran-owned small business as a diverse business. The term includes: (1) the National Minority Supplier Development Council; (2) the Women's Business Development Enterprise National Council; (3) the Small Business Administration; (4) The Department of Veteran Affairs; (5) the Pennsylvania Unified Certification Program.
9. Veteran-owned Small Business -A small business owned and controlled by a veteran or veterans.
10. Women-Owned Business - A business owned and controlled by a majority of individuals who are women.
(c) Actions Required by Proposer during the procurement/consultant selection phase

## 1. Submission Requirements - Consultant Responsiveness.

a. Minimum Participation Level (MPL) Documentation - If the documentation submitted with the proposal demonstrates that the proposer has identified DBs sufficient to meet the MPL established for this contract, the proposer will be deemed to have satisfied the DB requirement during this phase. The proposer is required to provide the business name and business address of each DB and supporting documentation that includes proof of certification.

If the consultant's proposal demonstrates the consultant's inability to meet the MPL established for this contract, the proposer shall demonstrate Good Faith Efforts with its proposal. Failure to submit the required documentation demonstrating Good Faith Efforts as further described below with the proposal may result in a rejection of the proposal.
b. If no MPL has been established for this contract, the proposer is required to either provide a statement of intent that it will self-perform $100 \%$ of the work for the agreement, or demonstrate Good Faith Efforts to solicit subconsultants that are DBs. In either case documentation shall be provided with the proposal.

Failure to submit the required information identified above with the proposal may result in a rejection of the proposal.
2. Good Faith Effort Requirements: The documentation of Good Faith Efforts must include the business name and business address of each DB considered. Supporting documentation must also include proof of certification and any explanation of Good Faith Efforts the proposer would like the Commission to consider. Any services to be performed by a DB are required to be readily identifiable to the agreement. Good Faith efforts are demonstrated by seeking out DB participation in the project given all relevant circumstances. The Commission requires the proposer to demonstrate more than Pro Forma Efforts. Evidence of Good Faith Efforts includes, but is not limited to:
a. Consultant solicits through all reasonable and available means the interest of all certified DBs with the capacity to perform the scope of work set forth in the agreement.
b. The proposer must provide written notification at least 5 business days before proposals are due to allow the DBs to respond to the solicitation.
c. The proposer must determine with certainty if DBs are interested by taking appropriate steps to follow up initial solicitations.
d. The proposer must make efforts to select portions of the work to be performed by DBs to includes, where appropriate, breaking out contract work into economically feasible units to facilitate DB participation;
e. It is the proposer's responsibility to make a portion of the work available to DBs and, to select those portions of the work, so as to facilitate DB participation.
f. The proposer shall provide evidence of such negotiations that include the names, addresses, and telephone numbers of DBs considered; A description of the information provided regarding the required work and services for the work selected for subconsultants; and evidence as to why additional agreements could not be reached for DBs to perform the work.
g. Proposers cannot reject or withhold solicitation of DBs as being unqualified without sound reasons based on a thorough investigation of their capabilities.
h. The DB's standing within its industry, membership in specific groups, organizations or associations and political or social affiliations (for example union v. non-union employee status) are not legitimate causes for the rejection or non-solicitation of proposals in the proposer's efforts to meet the Good Faith Efforts requirement.
i. Efforts to assist interested DBs in obtaining bonding, lines of credit or insurance.
3. Actions Taken by the Commission. As part of the proposal review process, the Commission will review the submissions to determine whether the proposer has complied with Section 303 and this requirement in the selection of DB subconsultants. The Commission will determine whether the proposer has either met the MPL or provided acceptable documentation as noted above. The Commission reserves the right to contact proposers for clarification during the review and negotiation process.

If the Commission determines that the proposer has failed to either meet the MPL or provide acceptable documentation as noted above, the proposal may be rejected.

## (d) Consultant Requirements During Performance of Services.

1. Replacement of a DB Subconsultant. Consultant must continue good faith efforts through completion of the contract. The obligation to make Good Faith Efforts to solicit subconsultants for any type of service extends to additional work required for any service which is identified to be performed by a DB. If at any time during the performance of the work, it becomes necessary to replace or add a subconsultant that is a DB, the consultant, as appropriate, shall immediately notify the Commission and seek approval in
writing in accordance with the Agreement of the need to replace the DB, which notice shall include the reasons for the replacement. If a prime consultant who originally indicated that it would self-perform all work subsequently decides to use a subconsultant for any work under the contract, the consultant must submit documentation of all Good Faith Efforts as to the work for which a subconsultant is obtained.
2. Records. Maintain project records as are necessary to evaluate DB compliance and as necessary to perform the reporting function addressed below. Maintain all records for a period of 3 years following acceptance of final payment. Make these records available for inspection by the Commission, its designees or agents. These records should indicate:
2.a. The number of DB and non-DB subconsultants and the type of services performed on or incorporated in this project.
2.b. The progress and efforts made in seeking out DB subconsultant organizations and individual DB consultants for work on this project to increase the amount of DB participation and/or to maintain the commitments made at the time of the proposal to DBs.
2.c. Documentation of all correspondence, contacts, telephone calls, and other contacts made to obtain the service of DBs on this project.
3. Reports. Maintain monthly reports and submit reports as required by the Commission concerning those contracts and other business executed with DBs with respect to the records referred to in subsection (e)2. above in such form and manner as prescribed by the Commission. At a minimum, the Reports shall contain the following:
3.a The number of Contracts with DBs noting the type of services provided, including the execution date of each contract.
3.b The amounts paid to each DB during the month, the dates of payment, and the overall amounts paid to date. If no payments are made to a DB during the month, enter a zero (\$0) payment.
3.c Upon request and upon completion of individual DB firm's work, submit paid invoices or a certification attesting to the actual amount paid. In the event the actual amount paid is less than the award amount, a complete explanation of difference is required.

## 4. Subconsultant Contracts

4.a. Subcontracts with DB firms will not contain provisions waiving legal rights or remedies provided by laws or regulations of the Federal Government or the Commonwealth of Pennsylvania or the Commission through contract provisions or regulations.
4.b. Prime consultant will not impose provisions on DB subconsultants that are more onerous or restrictive than the terms of the prime's contract with non-DBs.
4.c. Executed copies of subcontracts/purchase orders are to be received by the Commission before the commencement of work by the DB.
5. Payments to DB Subconsultants. Payments to DBs are to be made in accordance with the prompt payment requirements of Chapter 39, Subchapter D of the Procurement Code, 62 Pa.C.S. §3931 et seq. Performance of services by a DB subcon sultant in accordance with the terms of the contract entitles the subconsultant to payment.
(e) Actions to be Taken by Commission After Performance of Services. Following completion of the Consultant's services, the Director of the Commission's Office of Diversity and Inclusion or his/her designee will review the overall DB participation to assess the Consultant's compliance with Section 303 and this contract. Appropriate sanctions may be imposed under 62 Pa.C.S. § 531 (relating to debarment or suspension) for a Consultant's failure to comply with Section 303 and the requirements of the contract.

## APPENDIX G - RFP 19-40120-8569

## CONSTRUCTION DOCUMENTATION SYSTEM (CDS) FUNCTIONAL/TECHNICAL REQUIREMENTS

Version 1.2<br>Feb. 21, 2019

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## Introduction

The Pennsylvania Turnpike Commission (PTC) uses a client/server Construction Documentation System (CDS) application to track and manage construction activity on PTC projects. The current software comprises two modules: CDS Field Office, use at the construction site to manage documentation associated with the construction process, and CDS Quality Assurance (QA), used by PTC staff responsible for QA reviews.

- CDS Field Office

Contractors bid on statements of work in the Electronic Bidding System (EBS). A PTC stakeholder uses the newly awarded contract to set up data structures within CDS Field Office, directly related to the items on the contract and the construction dates. CDS then uses this structure to manage inspections of the construction process; any changes to the contract; and payment releases. Actual payment then occurs via the SAP enterprise resource planning (ERP) system. In general, each contract/project has its own "instance" of CDS.
At the construction site, the work flow associated with CDS centers around the Inspector Daily Report (IDR), also known as the "Daily Work Report" (DWR) in some jurisdictions. The CDS tracks all inspection activity and derivative documents, such as payment estimates, contract changes, work history, external invoices, DBE goal monitoring, certified payroll tracking, material certification tracking, and monthly cost drawdowns.

The PTC also maintains a master CDS containing data consolidated from all of the discrete CDS instances.

- CDS QA

This module is used for establishing a schedule to collect samples and record lab results. PTC staff use a single instance of CDS QA to track samples and QA activity across multiple projects.

## Systems Overview

Currently, contractors do not have access to CDS. Instead, they access contract-related information via the Project Collaboration System (PCS). PCS is an external document-based system hosted by Kahua, Inc., with direct integration to DocuSign. All stakeholders use PCS/DocuSign when (electronic) signatures are required on contract documentation. In addition, contractors use Kahua as their repository for documentation required by the contract, such as payrolls, subcontract DBE/DB payments, material certifications (CS-4171), and material tickets.

The PTC uses CDS to generate documents, such as pay estimates and change orders, which are then placed in PCS. The PTC uses PCS to route estimates for approval, and change orders are routed outside the systems for approval. An approval of these documents requires further action within CDS to complete the process.

To complete the payment process, SAP is the financial system utilized to apply payments that result from activity documented in CDS. CDS provides a dump of contract drawdown data to facilitate these payments. All other interaction with SAP involves manual effort, including time and expense reporting.

Field Representatives collect field samples for Quality Control (QC), Acceptance Testing (AT), and independent Verification Testing (VT) that are tested onsite or at designated testing facilities. Ultimately the test results are input into CDS. QA staff from PTC conduct quality reviews and lift samples at construction sites; ship these samples to external laboratories for quality assurance (QA) testing. Outbound communication with the laboratories occurs primarily in the form of shipping documents; inbound communication occurs in PCS, or as e-mail, and U. S. mail of test results.

At present, each construction site maintains copies of the CDS program. For PTC-managed contracts, the data files relevant to the specific contract(s) are typically stored offsite on a dedicated PTC networked database computer, which local PTC computers can communicate with. For consultant-managed contracts, the data files relevant to the specific contract(s) are stored at that contract's field office. The software also has import/export technology to enable the various construction sites to transport their data to PTC headquarters, where it is merged with other enterprise CDS information for cross-project reporting.

The accompanying diagram is a high-level view of the current CDS and other systems which interact with it. Please refer to the diagram on page 16 for the envisioned context of the new CDS environment.

# High Level Context Diagram <br> (Current) 



The current work processes related to daily construction management are paper-driven, with copies of all documents maintained in PCS. Workflow related to CDS involves the following five roles.

## Inspectors

Inspectors notate their findings on paper or electronic IDRs, then either (1) input the information directly into CDS or (2) deliver their paper forms to the corresponding CDS Operator for entry. Option 2 is the primary form of input for the present.

## CDS Operator

The CDS Operator is responsible for obtaining IDRs from all assigned field staff and reviewing their inspection data. The review can include requesting the inspector to modify/correct the original IDR based on the professional judgment of the CDS Operator.
At present, the CDS Operator does direct data entry of IDR data on behalf of the inspectors. The original paper copy, with hand-written notes and signatures, is scanned and stored in PCS.

The CDS Operator also utilizes the CDS program to track comprehensive information on the project/contract. Examples include contract deficiencies; material certifications; status of certified payrolls; material test results; track DBE/DB participation; manage subcontractors listed in CDS; compute price adjustments; generate and track external invoices; generate estimates, change authorizations, change orders; exporting contract backups to PCS; tracking extra work and additional work; process closeout documents.

## Construction Manager

The Construction Manager monitors the status of items within the contract; monitors the contractor's activities with regards to the schedule; monitors Contractor workmanship acceptance criteria for defective work; analyzes cost drawdown information; monitors punchlist status; generates change orders and authorizations; reviews master dairies; reviews and accepts estimates; utilizes most of the reports generated from CDS; reviews insurance claimrelated information; utilizes the Change Order What-If Analysis function; and completes an IDR daily. The CM may directly enter this IDR into CDS.

The Construction Manager is also involved in approvals (time sheets, mileage/meals). At present, this occurs outside the CDS environment.

## System Administrator

The System Administrator deploys and installs CDS on field office computers and is responsible for most issues related to Contract configuration and setup. System Admins also assist with CDS issue resolution and implement Contract-specific changes as requested by the PTC Project Manager and/or Construction Manager.
System Administrators serve as the liaison with the IT support staff. They provide criteria for software enhancements, test these enhancements, and help deploy system upgrades to the community. They records CDS issues as they arise and works to resolve those issues with the CDS Software Engineer and end users.

## Quality Assurance

The QA Staff utilizes CDS Quality Assurance to review procedures and construction processes to ensure contract compliance. CDS generates a comprehensive report of these reviews.

The QA Staff also utilizes CDS Field Office to conduct audits on processed estimates, including investigating calculations and payments when necessary.

## Problem Statement

The current CDS application is built on 1990s-era architecture. In general, each project/contract has a discrete copy of CDS for monitoring the work effort. The contract data file(s) are either locally stored at the contract field office or on a PTC networked computer. The CDS Operator manually exports copies of his/her contract data, which is then uploaded to PCS. Ultimately these files are consolidated into a master CDS database at the TIP Building.
CDS Operators generate documents using CDS data and place them in the PCS collaboration site. The mechanics of using it require effort to set up instances of CDS; export data; and install upgrades when they are developed. The inspection process relies on IDRs, subsequently input into the local CDS by the Inspector or their proxy, i.e., the CDS Operator.

The software is not maintained by the PTC’s Information Technology (IT) Department and does not adhere to current PTC standards. It was developed and is maintained outside the IT Department. A single consultant is responsible for all programming support; modifications occur periodically as needs require. In addition to the consultant, several Engineering staff assist with technical integration.

The PTC desires a technology refresh. Major problems to be addressed include all of the following:

1. Mechanics of distributing software and project data between headquarters and construction sites.
2. Relative age of the software and risk associated with maintaining it.
3. Mechanics of conducting/recording an inspection, including direct data entry by all stakeholders.
4. Elimination/reduction of requirements for CDS Operator to input Inspectors' IDRs
5. Greater automation between systems, including elimination of duplicate data entry.
6. Better use of current technology.
7. Integration QA and Materials into CDS instead of stand-alone application.

## Functional Requirements

The new system must address the following business functions. The numbering in this section directly cross-references to Use Cases 1-51 in Appendix K.

|  | Importance |  |  |
| :--- | :--- | :--- | :--- |
| REQUIREMENT | Mandatory | Highly <br> Desired | Desired | Optional | On |
| :--- |

## INSPECTOR FUNCTIONS

## 1. Complete an IDR not specific to items of work

This includes functionality related to PTC 370A/B Project Activities.

- Change authorization is addressed separately.
- Time reporting is addressed separately.
- Signature requirements are addressed separately.
- Attachment requirements are addressed separately.
- External forms, e.g., PennDOT CS-4171, are treated as attachments.

2. Complete an IDR specific to items of work

This includes functionality related to PTC 371 General Construction.

- Signature requirements are addressed separately.
- Attachment requirements are addressed separately.
- External forms, e.g., PennDOT CS-4171, are treated as attachments.
This includes functionality related to PTC 374A/B HMA/Bituminous Pavement QC.
- Signature requirements are addressed separately.
- Attachment requirements are addressed separately.
- External forms, e.g., PennDOT CS-4171, are treated as attachments.
This includes functionality related to PTC 375 Concrete Placement QC.
- Signature requirements are addressed separately.
- Attachment requirements are addressed separately.
- External forms, e.g., PennDOT CS-4171, are treated as attachments.
This includes functionality related to PTC 376 Maintenance and Protection of Traffic Report Time reporting is addressed separately.
- Signature requirements are addressed separately.
- Attachment requirements are addressed separately.

This includes functionality related to PTC 376P Pavement Markings.

- Signature requirements are addressed separately.
- Attachment requirements are addressed separately.

This includes functionality related to PTC 372 Labor \& Equipment Worksheet, including pulldowns.

- Signature requirements are addressed separately.

3. Modify a previously submitted IDR that is returned for correction
Note: the mechanics of approving/rejecting an IDR will vary based on the specific solution.

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CDS Functional/Technical Requirements

|  | Importance |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| REQUIREMENT | Mandatory | Highly Desired | Desired | Optional |
| 4. Create a new Plan Location | X |  |  |  |
| 5. Add a New Item of Work | X |  |  |  |
| 6. Force Account Daily Sign Off (DSO) | X |  |  |  |
| 7. Generate/Modify Contract Calendar | X |  |  |  |
| 8. Complete a material receipt for an item Business requirement includes recording the certification/material tickets/invoices. | X |  |  |  |
| 9. Create a deficiency observed for an item | X |  |  |  |
| 10. Update a deficiency observed for an item | X |  |  |  |
| 11. Wage Rate Interview - Initiation | X |  |  |  |
| 12. Construction Stormwater Inspection | X |  |  |  |

## CDS OPERATOR FUNCTIONS

| 13. Assign an inspector to a project / contract | X |  |  |
| :---: | :---: | :--- | :--- |
| 14. Un-assign an inspector from a project / contract | X |  |  |
| 15. Edit Contract-wide Control Table | X |  |  |
| 16. Adjust Commodity Prices | X |  |  |
| 17. Cost Drawdown Information <br> 18. Contract closeout <br> Complete all materials testing data <br> Complete all plan locations <br> Update the deficiency log <br> Track certs <br> Rerify payrolls <br> Project close-out and finalization checklist | X |  |  |
| 19. Review and approve an IDR | X |  |  |
| 20. Review and return an IDR | X |  |  |
| 21. Review and modify an IDR | X | X |  |
| 22. Close a day <br> Generating the Master Diary for the day (Req. 41) is a primary output of <br> this function | X |  |  |
| 23. Reopen a day |  |  |  |

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CDS Functional/Technical Requirements

|  | Importance |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| REQUIREMENT | Mandatory | Highly Desired | Desired | Optional |
| 24. Generate an estimate <br> The business requirement is to extract payable activity (currently to a report) for subsequent routing/approval. <br> - Approvals, routing will remain in PCS <br> - Retainage parameters | X |  |  |  |
| 25. Update the status of an approved estimate <br> The business requirement is to <br> - Link approval (in PCS) to CDS record and <br> - Trigger a subsequent payment (in SAP) | X |  |  |  |
| 26. Create an external invoice <br> The business requirement is to track contractor payments for incidentrelated repairs, for which PTC will be reimbursed. | X |  |  |  |
| 27. Enter DB/DBE payments <br> The business requirement is to <br> - Use documents received (in PCS) to data-enter payment amounts in CDS. <br> - Provide this information to the Project Manager, currently in spreadsheet EO-402 (Attachment 2, Appendix K - Use Cases). | X |  |  |  |
| 28. Process Certified Payrolls <br> The business requirement is to: <br> - Record presence/absence of required payroll information from the contractors. <br> - Check for accuracy and completeness for the applicable requirements. | X |  |  |  |
| 29. Wage Rate Interview - Completion | X |  |  |  |
| 30. Generate a (preliminary) change authorization <br> This includes functionality related to PTC 373 Authorization for Contract Work <br> - Signature requirements for CM or designee are addressed separately, <br> - Signature requirements by contractor staff is addressed separately. <br> - Initialed by PTC Project Manager. Signature requirements is addressed separately. | X |  |  |  |
| 31. Receive an approved Change Authorization | X |  |  |  |
| 32. Receive a rejected Change Authorization | X |  |  |  |
| 33. Enter Concrete / Bituminous / Aggregate test data | X |  |  |  |
| 34. Provide a Review Note on past records | X |  |  |  |
| 35. Stored Materials | X |  |  |  |
| 36. Generate / update a change order <br> Business requirement is to: <br> - Collate a number of change authorizations into a change order | X |  |  |  |

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CDS Functional/Technical Requirements

|  |  | Importance |  |  |
| :--- | :--- | :--- | :--- | :--- |
| REQUIREMENT | Mandatory | Highly <br> Desired | Desired | Optional |
| Extract this information (currently to a report) for subsequent    <br>  routing/approval. <br> Comprised of internal and external documents   |  |  |  |  |

SYSTEMS ADMIN FUNCTIONS
37. Contract setup

The business requirement is to create a new project, using data from other systems, e.g., EBS, SAP, Tab Wizard.
The setup should be automated, to the greatest extent practical.

| 38. Open End Type Contract Setup | X |  |
| :---: | :---: | :---: |
| 39. Add new user | X |  |
| 40. Update user information | X |  |
| 41. Edit System-wide Control Table <br> Business requirement is to use control tables for repeatable information, to <br> the greatest extent practical. <br> From the current system, examples include types of weather condition, <br> change order types, material producers, etc. <br> The new system might include other static information, such as standard <br> text/comments. | X |  |
| 42. Change Contract Status |  |  |
| Business requirement is to enable contract statuses that may be neither <br> active nor closed as a way to limit visibility to these contracts. | X |  |

## QA FUNCTIONS

| 43. Perform a review | X |  |  |
| :---: | :---: | :---: | :---: |
| 44. Generate a sample submission | X |  |  |
| 45. Generate a Summary Report | X |  |  |
| 46. Generate a Materials Action Plan | X |  |  |
| 47. Update a sample submission with lab results | X |  |  |
| 48. Perform a Periodic Estimate Audit | X |  |  |

## NON-ROUTINE FUNCTIONS

| 49. Complete entry of an IDR on behalf of an inspector. | X |  |  |
| :---: | :---: | :---: | :---: |
| 50. Document absences for project personnel. <br> The business requirement is to account for each assigned worker, for each <br> day the project is active. | X |  |  |
| 51. Indicate hiatus in construction schedule | X |  |  |

## Reporting Requirements (Use Case 52)

This section represents Functional Requirement 52 and additional information on business intelligence ( BI ) requirements.

## Required Reports

The following formatted reports are required in the new CDS. A few of them (marked) will become functions on the iPad.

## Change Order

Change Authorization
Change Authorization Summary
Change Order
Change Order (with Item Remarks)
Change Order Approved Item Summary
Change Order Justification (8 Questions)
Change Order Justification (8 Questions) - Blank (this will become an input function on the iPad)
Change Order Summary
Change Order What If Analysis

## Contract Progress

Contract Summary
Contract Summary - System-wide by Contract
Control Number Work Progress Summary
Current Item Values and Quantities
Work Progress Summary

## DBE/DB

DBE/DB Contract Status
DBE/DB Monthly Status EO-402
DBE/DB Payment Detail

## Estimates

Cost Drawdown
Cost Drawdown - System-wide by Contract
Estimate
Estimate Summary
Estimate Worksheet
External Invoice
Funding

## Final Inspection

Completion Certificate PTC-03-16
Deficiency

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CDS Functional/Technical Requirements
Final Contract Comparison and Summary Analysis
Materials Certification PTC-4238
Punch List Form PTC-4136

## Item Book

Auditor Item Book
Control Number Auditor Item Book
Control Number Item Book
Control Number Item Book - Condensed
Control Number Item Book - Condensed By Date
Control Number Work History Item Book
Item Book
Item Book - Condensed
Item Book - Condensed By Date
Work History Item Book

## Management Reports

Claims Mitigation
File Folders
Monday Morning - Weekly Tab
Operation Code By Route Cost Summary Report
Time Management - Actuals by Inspector

## Master Diary

Attachment Summary
Bituminous IDR
Concrete IDR
FID Personnel
General IDR
Inspector Daily
Master Diary
Master Diary Cover Sheet
Material Receipts
MPT IDR
Project Activity IDR
Work Assignments
Materials Log
Bituminous Compaction Summary
Concrete Cylinder Summary
Concrete Cylinder Worksheet (this will become a function on the iPad)
Contract JMF Summary
System-Level JMF Summary

## Open End

Open End Item Book
Open End Plan Location

## Payroll

Certified Payroll

## Plan Location

Control Number Plan Location
Plan Location
Plan Location - Condensed
Plan Location Change Quantity Report (for new Plan Locations)

## Price Adjustment

Bituminous Price Adjustment - Adjusted Payment History
Bituminous Price Adjustment - Detail
Bituminous Price Adjustment - Summary
Bituminous Price Adjustment Summary - Existing Months
Diesel Price Adjustment - Adjusted Payment History
Diesel Price Adjustment - Detail
Diesel Price Adjustment - Summary
Diesel Price Adjustment Summary - Existing Months

## QA

QA Bituminous Sample Report
QA Concrete Cylinder Summary
QA Concrete Cylinder Worksheet (this will be replaced by data entry on the iPad)
QA Concrete Sample Report
QA Review Details
QA Review Details with Checklist
QA Review Summary
QA Sample Frequency
QA Sample Summary
QA Summary Report Details

## Ad Hoc Reporting

The Commission requires a means of generating ad hoc reports from the CDS repository. The new CDS must provide a means of viewing/extracting data to accomplish functionality currently done via the following reports. Proposers must use these reports as guidelines for understanding data requirements. Proposers must create at least five of these in the new CDS for use as training exercises

## Enterprise-Enterprise

Change Order
Change Order - With Item Detail
Change Order Summary
Contractors Per Contract

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CDS Functional/Technical Requirements
Contracts Per Contractor
Contracts Per Inspector
Cost Projection Cash Flow Summary
DBE/DB
DBE/DB - Data Dump
Inspectors Per Contract
Material Receipts - Data Dump
Monthly Estimate Summary with Cost Drawdown Chart - System-wide by Contract

## Enterprise - Resource Management

Task Hours by Contract
Task Hours by Contract - With Day Detail
Task Hours by Work Assignment
Hours by Work Assignment - With Day Detail
Total Hours by Contract
Total Hours by Contract - With Day Detail
Total Hours by Role
Total Hours by Role - With Day Detail

## Master Diary

Master Diary Search

## Materials Log

Concrete Tracker
Concrete Tracker (Air/Slump/Temp) Report
Soil/Aggregate Sample Report

## Price Adjustment

Bituminous Price Adjustment Forecast Summary
Diesel Price Adjustment Forecast Summary
QA
QA Aggregate/Soil Sample Report
QA Bituminous Compaction Summary
QA Bituminous Tracker
QA Concrete Tracker

## Technical Requirements

This section presents high-level technical requirements. They appear below grouped by topic; use case references, if any, appear in parentheses. "New CDS" refers to the future system that will replace the current one. The new system must address the following business functions.

|  | Importance |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| REQUIREMENT | Mandatory | Highly | Desired | Optional |
| TECHNOLOGY |  |  |  |  |
| 1. The new CDS shall utilize contemporary browser-based or mobile technology. | X |  |  |  |
| 2. The new CDS shall allow input via Windows laptop or iPad. | X |  |  |  |
| 3. The new CDS shall enable use of external attachments, such as photos and scanned images. | X |  |  |  |
| 4. The new CDS shall enable standard input fields for all required data and format this data in a standard fashion, for attachment to IDRs. | X |  |  |  |
| 5. The new CDS shall be hosted by the Proposer or a third party. | X |  |  |  |
| 6. "Work for Hire" software must adhere to industry standards for quality and readability of code. | X |  |  |  |
| CONNECTIVITY |  |  |  |  |
| 7. Inspector functions shall execute on iOS devices, e.g., iPads. | X |  |  |  |
| 8. All other functions shall occur with network connectivity, with user access via PC using Microsoft Windows. | X |  |  |  |
| DATABASE MANAGEMENT SYSTEM (DBMS) |  |  |  |  |
| 9. The new CDS shall utilize an industry-standard DBMS. | X |  |  |  |
| 10. The new CDS shall maintain a single DBMS to serve as repository of transactional CDS data. | X |  |  |  |
| 11. The DBMS shall retain a history of all updates and the ability for support staff to identify user ID and date/time stamp of data modifications. | X |  |  |  |
| 12. The new CDS shall enable ad hoc query of data using multiple filter/select criteria. |  | X |  |  |
| SECURITY/AUTHENTICATION |  |  |  |  |
| 13. The new CDS shall use Active Directory Federated Services (ADFS) for authentication as per Appendix D- Security Requirements. | X |  |  |  |
| 14. The new CDS shall encrypt data in transit. | X |  |  |  |
| 15. The new CDS shall accept credentials from the PTC network where available. |  | X |  |  |
| 16. The new CDS shall utilize role-based security. | X |  |  |  |
| 17. The new CDS shall determine user role by ADFS group membership using ADFS Claims. |  | X |  |  |


|  | Importance |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| REQUIREMENT | Mandatory | Highly Desired | Desired | Optional |
| 18. The new CDS, in conjunction with PCS, shall support some form of electronic signature. | X |  |  |  |
| 19. The new CDS, in conjunction with PCS, shall support some form of electronic routing for approvals. | X |  |  |  |
| 20. The new CDS shall use certificates from a third party provider that is a recognized and trusted authority in the industry to generate any certificates. | X |  |  |  |
| 21. The new CDS shall implement audit logs for user events (i.e., modifying data add/change/delete system data). | X |  |  |  |
| 22. The new CDS shall implement audit logs for security events (i.e. logins, failed logins, attempting to perform action outside security role, etc.). | X |  |  |  |
| 23. The new CDS shall secure audit logs against unauthorized access or modification. | X |  |  |  |
| 24. The new CDS shall have the ability to extract/download audit logs, upon request. | X |  |  |  |
| 25. The new CDS shall support role-based security based on access to data and functionality | X |  |  |  |
| MAINTENANCE |  |  |  |  |
| 26. Software upgrades shall occur with minimal/zero interaction by end users. | X |  |  |  |
| 27. The support model shall allow periodic enhancements, funded by the PTC. | X |  |  |  |
| 28. The software release process shall follow a standard Release Management process, with PTC sign-off prior to any changes to the production environment. | X |  |  |  |
| 29. The CDS system shall be available $24 \times 7 \times 365$ other than maintenance scheduled during agreed-on windows. | X |  |  |  |
| 30. The software will adhere to an approved backup/recovery process. | X |  |  |  |
| 31. The new CDS shall follow standard processes for disaster recovery (DR)/business continuity. At a minimum, the DR plan must address <br> - Power or critical service failure <br> - Physical disasters, e.g., fire/water damage <br> - Security breaches, such as distributed denial-of-service attacks | X |  |  |  |
| PCS INTEGRATION |  |  |  |  |
| 32. PCS shall notify the new CDS upon final DocuSign sign-off of project documents, including: <br> - Pay Estimates <br> - Change Authorizations <br> - Change Orders |  | X |  |  |
| 33. PCS shall accept documents from CDS, including but not limited to: <br> - Pay Estimates, |  | X |  |  |

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CDS Functional/Technical Requirements

|  | Importance |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| REQUIREMENT | Mandatory | Highly <br> Desired | Desired | Optional |
| $\bullet$ <br> $\bullet$ <br> $\bullet$ <br> $\bullet$ <br> $\bullet$ <br> Change Authorizations <br> Project Close-Out Packet |  |  |  |  |
| SAP INTEGRATION |  |  |  |  |
| 34. SAP shall accept approved pay estimates from the new CDS <br> [or from PCS, based on final workflow]. |  |  | X |  |
| 35. SAP shall accept cost drawdown data from the new CDS |  |  | X |  |

## TAB WIZARD

36. CDS shall accept data structures from TabWizard (or equivalent) for project setup.

## EBS INTEGRATION

37. CDS shall accept data structures from EBS for project setup

|  | X |  |  |
| :--- | :--- | :--- | :--- |

Lab INTEGRATION

| 38. CDS shall generate documents to accompany samples <br> delivered to the lab. | X |  |  |
| :---: | :---: | :---: | :---: |
| 39. CDS shall accept testing results from labs. | X |  |  |

## BUSINESS INTELLIGENCE

40. The new CDS shall support business reporting without impacting ongoing usage (transactional data)
41. CDS shall generate the standard reports, listed as Functional Use Case \#52
42. CDS shall provide ad hoc reporting capability as described at Functional Use Case \#52, including the ability to save queries for future re-use.

| $X$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| $X$ |  |  |  |

## Additional Requirements Detail

This section provides additional information related to technical integration. Please also refer to the "Workflow/Integration Use Cases" of Appendix K - CDS Use Cases for additional business context.

## Context Diagram

The diagram below is a context diagram of the new CDS environment. Staff will work using a single shared repository, accessed either from iPad or from a PC.

Interfaces are one-way. As part of contract setup, staff will import data structures from EBS and Tab Wizard. CDS will also output certain forms/reports to PCS. Any interaction with SAP will be manual.


## Approval Process

This text expands on Technical Requirements 16-19 and Use Case 62 of Appendix K - CDS Use Cases.

The current approval process requires physical signatures on paper and DocuSign signatures within PCS. This will change in the new environment.

In the new environment, CDS will maintain traceability (based on User ID and the user's role) for various participants who have reviewed the data collected for inspections and other inspection processes. The Commission envisions a process similar to a work queue, with IPDRs routing to designated individuals for review/approval. This will all occur within CDS.

When documents/forms are prepared for external signature, the new CDS will format the information into a document/report and place it in PCS for signature via DocuSign.

## PCS Integration

This text expands on Technical Requirements 32 and 33.
Kahua provides a configurable, cloud-based collaboration platform that facilitates the exchange of data, documents and workflow among business partners. The PCS executes in a cloud environment using the File Manager product from Kahua. The Commission stores contract documents in Kahua and uses DocuSign for signatures by external stakeholders.

Integration is two-fold:

- When a document signature process has been completed in Kahua, this should trigger a work item within CDS. (Technical requirement \#32)
- For several specific processes, the final output is a set of documents, which must be stored in PCS. (Technical requirement \#33)

The Kahua Platform offers several methods for integration including an application programming interface (API) that offers various endpoints accessed using Hypertext Transfer Protocol Secure (HTTPS) uniform resource locator (URL) and return JSON or Binary file data. During detailed design, the Commission will facilitate introductions with the Kahua vendor for additional technical details. Proposers can also reference the following link for additional information: https://www.kahua.com/products-2/module-file-manager.

The Kahua platform also includes a visual app development environment (kBuilder) for clients and third-party developers to build new Kahua apps or modify/extend existing apps. The Commission will provide access to this platform via its enterprise licenser, including access to technical documentation available from the vendor.

Kahua App API interfaces are specified within the App definition (codified as XML) using kBuilder. The diagram below provides a high-level overview of the components involved in a custom integration with Kahua. The first component at the top of the diagram is the third-party host application, in this case the new CDS application. This application employs the RESTful

JSON web API to Kahua to execute the various services that are defined within the Apps on the Kahua platform.

When the request is received by the Kahua platform, authorized requests are delegated to the Kahua App Logic as defined in Activities, Inflows, and Outflows. The Kahua App Logic employs the use of various platform services offered by the Kahua Domain Services to retrieve or store data.


Appendix H - RFP 19-40120-8569

## REQUIREMENTS TRACEABILITY MATRIX

## Requirements Traceability Matrix

Proposers must use the following matrix to indicate their acceptance of the RFP requirement referenced in Appendix G - Functional/Technical Requirements. The Commission envisions a maximum of five releases of software during Phase I. Place an ' X ' in the appropriate column based on when the requirement will first become available for testing.

The matrix is for initial high-level planning. The Commission anticipates negotiating a final delivery schedule after discussion with the Proposer.

| Requirement | Phase I |  |  |  |  | Phase II |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 | 2 | 3 | 4 | 5 |  |
| FUNCTIONAL REQUIREMENTS |  |  |  |  |  |  |
| INSPECTOR SCENARIOS |  |  |  |  |  |  |
| 1. Complete an IDR not specific to items of work |  |  |  |  |  |  |
| 2. Complete an IDR specific to items of work |  |  |  |  |  |  |
| 3. Modify an IDR that is returned for correction |  |  |  |  |  |  |
| 4. Create a new Plan Location |  |  |  |  |  |  |
| 5. Add a New Item of Work |  |  |  |  |  |  |
| 6. Force Account Daily Sign Off (DSO) |  |  |  |  |  |  |
| 7. Generate/Modify Contract Calendar |  |  |  |  |  |  |
| 8. Complete a material receipt for an item |  |  |  |  |  |  |
| 9. Create a deficiency observed for an item/document |  |  |  |  |  |  |
| 10. Update a deficiency observed for an item/document |  |  |  |  |  |  |
| 11. Wage Rate Interview - Initiation |  |  |  |  |  |  |
| 12. Construction Stormwater Inspection |  |  |  |  |  |  |
| CDS OPERATOR SCENARIOS |  |  |  |  |  |  |
| GENERAL ADMINISTRATIVE ACTIVITY |  |  |  |  |  |  |
| 13. Assign an inspector to a project/contract |  |  |  |  |  |  |
| 14. Un-assign an inspector from a project/contract. |  |  |  |  |  |  |
| 15. Edit Contract-wide Control Table |  |  |  |  |  |  |
| 16. Adjust Commodity Prices |  |  |  |  |  |  |
| 17. Cost Drawdown Information |  |  |  |  |  |  |
| 18. Contract closeout |  |  |  |  |  |  |
| DAILY OPERATOR ACTIVITY |  |  |  |  |  |  |
| 19. Review and approve an IDR |  |  |  |  |  |  |
| 20. Review and return an IDR |  |  |  |  |  |  |
| 21. Review and modify an IDR |  |  |  |  |  |  |
| 22. Close a day |  |  |  |  |  |  |
| 23. Reopen a day |  |  |  |  |  |  |
| ROUTINE MAINTENANCE ACTIVITIES |  |  |  |  |  |  |


| Requirement | Phase I |  |  |  |  | Phase II |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 | 2 | 3 | 4 | 5 |  |
| 24. Generate an estimate |  |  |  |  |  |  |
| 25. Update the status of an approved estimate |  |  |  |  |  |  |
| 26. Create an external invoice |  |  |  |  |  |  |
| 27. Enter DB/DBE payments |  |  |  |  |  |  |
| 28. Process Certified Payrolls |  |  |  |  |  |  |
| 29. Wage Rate Interview - Completion |  |  |  |  |  |  |
| CHANGE MANAGEMENT |  |  |  |  |  |  |
| 30. Generate a (preliminary) change authorization |  |  |  |  |  |  |
| 31. Receive an approved Change Authorization |  |  |  |  |  |  |
| 32. Receive a rejected Change Authorization |  |  |  |  |  |  |
| 33. Enter Concrete / Bituminous / Aggregate test data |  |  |  |  |  |  |
| 34. Provide a Review Note on past records |  |  |  |  |  |  |
| 35. Stored Materials |  |  |  |  |  |  |
| 36. Generate/Update a Change Order |  |  |  |  |  |  |
| SYSTEM ADMIN SCENARIOS |  |  |  |  |  |  |
| 37. Contract Setup |  |  |  |  |  |  |
| 38. Open End Type Contract Setup |  |  |  |  |  |  |
| 39. Add a new user |  |  |  |  |  |  |
| 40. Update User Information |  |  |  |  |  |  |
| 41. Edit System-Wide Control Table |  |  |  |  |  |  |
| 42. Change Contract Status |  |  |  |  |  |  |
| QA SCENARIOS |  |  |  |  |  |  |
| 43. Perform a review |  |  |  |  |  |  |
| 44. Generate a sample submission |  |  |  |  |  |  |
| 45. Generate a Summary Report |  |  |  |  |  |  |
| 46. Generate a Materials Action Plan |  |  |  |  |  |  |
| 47. Update a sample submission with lab results |  |  |  |  |  |  |
| 48. Perform a Periodic Estimate Audit |  |  |  |  |  |  |
| NON-ROUTINE SCENARIOS |  |  |  |  |  |  |
| 49. Complete an IDR on behalf of an inspector. |  |  |  |  |  |  |
| 50. Document planned absences for contract personnel. |  |  |  |  |  |  |
| 51. Indicate Hiatus in Construction Schedule |  |  |  |  |  |  |



| Requirement | Phase I |  |  |  |  | Phase II |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 | 2 | 3 | 4 | 5 |  |
| 6. "Work for Hire" software follows industry standards. |  |  |  |  |  |  |
| CONNECTIVITY |  |  |  |  |  |  |
| 7. Inspector functions via disconnected iPads. |  |  |  |  |  |  |
| 8. All other functions with network connectivity |  |  |  |  |  |  |
| DATABASE MANAGEMENT SYSTEM (DBMS) |  |  |  |  |  |  |
| 9. An industry-standard DBMS. |  |  |  |  |  |  |
| 10. A single DBMS for transactional data. |  |  |  |  |  |  |
| 11. A history of all data updates |  |  |  |  |  |  |
| 12. Ad hoc query |  |  |  |  |  |  |
| SECURITY/AUTHENTICATION |  |  |  |  |  |  |
| 13. Active Directory Federated Services (ADFS) for authentication |  |  |  |  |  |  |
| 14. Data encrypted in transit. |  |  |  |  |  |  |
| 15. Authentication via PTC network |  |  |  |  |  |  |
| 16. Role-based security |  |  |  |  |  |  |
| 17. Role-based security via ADFS group membership |  |  |  |  |  |  |
| 18. Electronic signature. |  |  |  |  |  |  |
| 19. Electronic routing for approvals. |  |  |  |  |  |  |
| 20. Security certificate via third party provider |  |  |  |  |  |  |
| 21. Audit logs for user events |  |  |  |  |  |  |
| 22. Audit logs for attempted violations of system security |  |  |  |  |  |  |
| 23. Audit logs against unauthorized access or modification. |  |  |  |  |  |  |
| 24. Send logs to a syslog server. |  |  |  |  |  |  |
| 25. Role-based security based on access to data and functionality |  |  |  |  |  |  |
| MAINTENANCE |  |  |  |  |  |  |
| 26. Software upgrades with minimal/zero interaction by end users. |  |  |  |  |  |  |
| 27. Periodic enhancements |  |  |  |  |  |  |
| 28. Standard Release Management process |  |  |  |  |  |  |
| 29. Available 24x7x365, other than maintenance windows. |  |  |  |  |  |  |
| 30. An approved backup/recovery process. |  |  |  |  |  |  |
| 31. Standard processes for disaster recovery |  |  |  |  |  |  |
| PCS INTEGRATION |  |  |  |  |  |  |
| 32. PCS notifications upon final DocuSign sign-off |  |  |  |  |  |  |
| 33. PCS receipt/storage of CDS documents |  |  |  |  |  |  |
| SAP INTEGRATION |  |  |  |  |  |  |
| 34. SAP acceptance of pay estimates (may be manual) |  |  |  |  |  |  |
| 35. SAP acceptance if cost drawdown data (may be manual) |  |  |  |  |  |  |
| TAB WIZARD |  |  |  |  |  |  |
| 36. CDS acceptance of TabWizard data structures |  |  |  |  |  |  |
| EBS INTEGRATION |  |  |  |  |  |  |


| Requirement | Phase I |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ |  | $\mathbf{5}$ | Phase II |
|  |  |  |  |  |  |  |
| Lab INTEGRATION |  |  |  |  |  |  |
| 38. Lab sample documentation generated |  |  |  |  |  |  |
| 39. CDS acceptance of testing results from labs. |  |  |  |  |  |  |
| BUSINESS INTELLIGENCE |  |  |  |  |  |  |
| 40. BI reporting without impact on transactional DBMS |  |  |  |  |  |  |
| 41. Standard reports, listed as Functional Use Case \#52 |  |  |  |  |  |  |
| 42. Ad hoc reporting capability |  |  |  |  |  |  |

## APPENDIX I - HOSTING QUESTIONNAIRE

 RFP 19-40120-8569
## Appendix I-Hosting Questionnaire

Proposers are required to present a hosting capability for the new Construction Document System (CDS). Proposers must complete this questionnaire to describe the hosting environment for the new CDS. Note: the questionnaire applies to the hosting environment (as opposed to the CDS application). Depending on the type of contract, the Commission may choose to self-host the application.

## Location of Hosting Provider \& System Data

## Address

Please provide the physical address of the hosting location.

## Third Party Vendors

If third party services are included, please identify the vendor, describe the services, and define the relationship between the Proposer and the third party.

## Infrastructure

Describe the infrastructure of the hosted environment, e.g., hardware, software, operating system. Include a topology diagram or similar visual representation of the system.

## Scalability

Identify any virtualization software, e.g., VMWare, Hyper-V; and describe scalability.

## Data Repository

Describe encryption used on data at rest, if any. Who has access to the decryption keys? Describe your process for securing encryption keys. If the data will reside in a location other than the hosting location, so state and identify the location.

## Hosting Metrics

Assuming the Provider already provides similar hosting services, please provide recent statistics on uptime/availability of these services.

Service Levels
Describe the service levels proposed for 24x7x365 service.

## Cybersecurity

## Colocation

Will the CDS system be hosted in a dedicated or a shared environment? If shared, please describe how Commission data will be segregated from these other parties and describe how the proposed solution will protect the Commission from incidents generated by these other parties.

## Security Controls

Describe controls in place, especially in a shared environment. Who has access to the infrastructure, hardware, software, and data?

## Standards/Certifications

Describe any external certifications that apply to the hosted environment, e.g., SOC 2, SSAE 16 Type I and Type II Audits. Clarify whether the Commission will have access to certification reports.

## Event Management

Describe the logging and monitoring framework, including the Proposer’s process to report incidents to the Commission. Please also identify the physical mechanism of notifications (text alert, email, etc.).

## Security Breach/Major Incidents

Describe the incident response process for major incidents and security breaches.

## Major Incident History

Please identify any security breaches or major incidents in the past 24 months and summarize the timeline and outcomes. The Commission reserves the right to request details as part of evaluating proposals.

## Vulnerability Testing

Describe current processes for vulnerability assessments/penetration tests. Please identify the date of the most recent vulnerability assessment and/or penetration test and summarize the results. The Commission reserves the right to request details as part of evaluating proposals.

## Auditability

Which application and data access audit logs are available? Which activities are logged? Describe Commission access to logs and other audit information. Also describe the retention policy/process for system and audit logs.

## Hosting Maintenance and Support

## Support Desk

Describe the physical location of the team responsible for hosting support, if known. Describe their ability to respond to unexpected downtime in the hosting environment.

## Support Model

Describe how the Commission will communicate with the Provider, e.g., web portal, email, etc. Also describe how the Commission will communicate with third parties, if relevant.

## Support Hours

Describe availability of the Provider's staff to respond to issues related to availability of the hosted environment, i.e., 24x7x365.

## Responding to Hosting Issues

Describe the ability of the Proposer and/or its hosting subcontractor to respond to issues, including unexpected downtime.

## Maintaining the Hosting Environment

Describe processes for configuration management, patch installation, and malware prevention as they pertain to (1) the hosted environment and (2) the CDS application in that environment. Please also describe how the Provider will communicate changes to the Commission.

## Commission Oversight

Please describe the Commission's involvement, if any, in making changes to the hosted environment.

## Business Continuity/Disaster Recovery

## Data Backup

Describe backup processes, including the frequency of replication/synchronization. Also describe how the Commission can extract data for storage on its own servers.

## Disaster Recovery

Identify the location of the disaster recovery (DR) environment and describe the DR plan for the proposed solution.

## Recovery Time Objective

Define the recovery time objective (RTO) for restoring service if the hosted environment goes down.

## Security Controls

Are the same security controls implemented at the failover site as the primary site?
Appendix J-RFP 8569-Cost Breakdown
Contract Totals
Base contract
Phase 1 (maximum 2 years) ..... \$0.00
Year 3 (Maintenance) ..... \$0.00
Year 4 (Maintenance) ..... \$0.00
Base contract ..... $\$ 0.00$
Option Years
Year 5 (Maintenance) ..... \$0.00
Year 6 (Maintenance) ..... \$0.00
Year 7 (Maintenance) ..... $\$ 0.00$
Option Years ..... \$0.00

## Appendix J-RFP 8569-Cost Breakdown

## Phase 1 Deliverables (Years 1-2)

Phase 1 costs are per deliverable. Proposer must itemize Project Deliverables based on proposed solution. Additional lines may be inserted.

| Phase/Deliverable | One-Time |  |  |
| :--- | ---: | :---: | :---: |
| Initiation Tasks |  |  |  |
| WBS/RACI | $\$ 0.00$ |  |  |
| Planning Tasks |  |  |  |
| Project Management Plan | $\$ 0.00$ |  |  |
| Execution Tasks |  |  |  |
| Project Deliverables TBD | $\$ 0.00$ |  |  |
| Project Deliverables TBD | $\$ 0.00$ |  |  |
| Project Deliverables TBD | $\$ 0.00$ |  |  |
| Project Deliverables TBD | $\$ 0.00$ |  |  |
| Project Deliverables TBD | $\$ 0.00$ |  |  |
| Training/Support Documentation | $\$ 0.00$ |  |  |
| Monitoring and Controlling Tasks |  |  |  |
| Project Management Reports | $\$ 0.00$ |  |  |
| Closing Tasks |  |  |  |
| Final Report | $\$ 0.00$ |  |  |
| Phase 1 Total |  |  | $\$ 0.00$ |

## Appendix J-RFP 8569-Cost Breakdown

## Phase 2 Maintenance

Phase 2 costs are per deliverable, as shown. The Commission will use the Rate Card for additional services, as needed.

Monthly Recurring Costs

|  | Year 3 |  |  | Year 4 |  |  | Year 5 |  |  | Year 6 |  |  | Year 7 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Qty | Cost | Total | Qty | Cost | Total | Qty | Cost | Total | Qty | Cost | Total | Qty | Cost | Total |
| Maintenance and Support | 12 | \$0.00 | \$0.00 | 12 | \$0.00 | \$0.00 | 12 | \$0.00 | \$0.00 | 12 | \$0.00 | \$0.00 | 12 | \$0.00 | \$0.00 |
| Hosting | 12 | \$0.00 | \$0.00 | 12 | \$0.00 | \$0.00 | 12 | \$0.00 | \$0.00 | 12 | \$0.00 | \$0.00 | 12 | \$0.00 | \$0.00 |
| Other (Please define) | 12 | \$0.00 | \$0.00 | 12 | \$0.00 | \$0.00 | 12 | \$0.00 | \$0.00 | 12 | \$0.00 | \$0.00 | 12 | \$0.00 | \$0.00 |
| Other (Please define) | 12 | \$0.00 | \$0.00 | 12 | \$0.00 | \$0.00 | 12 | \$0.00 | \$0.00 | 12 | \$0.00 | \$0.00 | 12 | \$0.00 | \$0.00 |
| Other (Please define) | 12 | \$0.00 | \$0.00 | 12 | \$0.00 | \$0.00 | 12 | \$0.00 | \$0.00 | 12 | \$0.00 | \$0.00 | 12 | \$0.00 | \$0.00 |
| Other (Please define) | 12 | \$0.00 | \$0.00 | 12 | \$0.00 | \$0.00 | 12 | \$0.00 | \$0.00 | 12 | \$0.00 | \$0.00 | 12 | \$0.00 | \$0.00 |
| Yearly subto |  |  | \$0.00 |  |  | \$0.00 |  |  | \$0.00 |  |  | \$0.00 |  |  | \$0.00 |

## Appendix J-RFP 8569-Cost Breakdown

## Phase Rate Card

Provide hourly rates for additional services/enhancements TBD.

| Phase 2 Rate Card | Hourly Rates |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 |
| Project Manager | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Developer | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Other (Please define) | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Other (Please define) | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Other (Please define) | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Other (Please define) | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |

Appendix K - RFP 19-40120-8569
CONSTRUCTION DOCUMENTATION SYSTEM (CDS)

## USE CASES

Version 1.2
February 21, 2019

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## ATTACHMENTS

ATTACHMENT 1: FORMS
ATTACHMENT 2: REPORTS

## Introduction

The Pennsylvania Turnpike Commission (PTC) currently uses an aging construction documentation system called CDS to document the construction process, complete and submit inspector daily reports (IDR) for materials, labor, and equipment, generate pay estimates, and provide work flow to support validation processes throughout the life of a project. The PTC intends to implement a replacement for CDS that conforms to modern IT standards and provides more robust features, including but not limited to the reduction of manual processes where appropriate and mobile device platform support, cloud based centralized database(s) solution, and real-time updates of field collected data.

This document presents Use Cases to demonstrate the interaction between end-users and the (future) CDS application. The Use Cases are therefore hypothetical, designed to be independent of the specific technology currently in use. This document references multiple PTC forms to demonstrate current functionality. They are included as a means of quickly denoting business function, i.e., the content embedded in the form. The future CDS may or may not use the same form. Similarly, the use cases occasionally reference specific screens in the current CDS. This is intended to convey a sense of the underlying transaction. The future CDS may have an entirely different interface to accomplish the same function.

## User Roles

This document groups the user-related use cases according to five roles. These represent a hierarchy, summarized in the accompanying table, where each higher level of authority can perform the work of all underlying roles. For example, the Construction Manager (CM) can also perform CM functions plus the function of a CDS Operator or an Inspector; a CDS

| Field Office Roles | QA Roles |
| :--- | :--- |
| Inspector | QA Staff |
| CDS Operator |  |
| Construction Manager | QA Audit |
| System Admin |  | Operator can also perform CDS Operator functions plus Inspector functions, etc. Field Office and QA Roles operate in separate and independent hierarchies.

At any time, assigned role(s) can be delegated to another user.

## User-Related Use Cases

The user-related use cases present human interaction directly with the CDS system. In most cases, "CDS" is a secondary actor for each function. Where the use case also includes direct interaction with another system, such as PCS or SAP, this other system is listed as a secondary actor.

## Workflow/Integration Use Cases

Workflow/Integration use cases represent inter-system activity. These generally have both an Originating System and a Receiving System, one of which is CDS. If a human is directly involved, this relationship appears as an Actor in the use case.

## Approval Process

Many functions require approvals. This document assumes the CDS system will maintain a full audit trail of add/change/delete activity; integrate with PCS/DocuSign for some approvals; and utilize physical signatures for others. Please also refer to the Approval Process use case.

## Navigation

Many of the user-related use cases include actions that describe an inferred navigation to the particular record(s) to be updated. This is intended here to help document the underlying data relationships, e.g., an inspector on a specific contract recording information about a specific line on a given day. This is not intended to define the mechanics of navigation in a future environment.

## Forms and Reports

Appendix 1 and Appendix 2 contain copies of forms and reports, as currently generated by CD. In the use case narrative, forms are referenced by number in the relevant scenario. Reports are discussed under the Business Intelligence use case.

## User-Related Use Cases

These use cases focus on direct interaction between an end user and the CDS software.

## Inspector Scenarios

These scenarios describe Inspector tasks, presented in increasingly complex scenarios. Unless otherwise noted, the scenario assumes the inspector has Internet connectivity to the CDS application.

| Name: | 1. Complete an IDR not specific to items of work |
| :--- | :--- |
| Primary <br> Actor(s) | Inspector |
| Secondary <br> Actors(s) | CDS |
| Preconditions | I am assigned to a given contract. <br> There is 1 type of IDR not associated with specific items: <br> $\bullet \quad$ Project Activity |
| Scenario | I am documenting something not related to a work item. <br> I open the CDS application. <br> I identify my project/contract. <br> I locate the appropriate IDR form in the system. <br> I enter my findings in the CDS application. <br> I submit the IDR when it has been completed. |
| Post Conditions | • The IDR is submitted in a "ready for review" status. <br> •The IDR is available to be reviewed by the CDS Operator/CM |

## References:

Project Activity -Form PTC 370A/B

| Name: | 2. Complete an IDR specific to items of work |
| :---: | :---: |
| Primary <br> Actor(s) | Inspector |
| Secondary <br> Actors(s) | $\begin{aligned} & \hline \text { CDS } \\ & \text { Inspection Item(s) } \end{aligned}$ |
| Preconditions | I am assigned to a given contract. <br> The project has many contract items associated with it. <br> There are 5 types of IDRs and various attached forms that are associated with work items. <br> The 5 IDR types are: <br> - General Construction <br> - Bituminous Pavement Quality Control <br> - Concrete Placement Quality Control <br> - Maintenance and Protection of Traffic <br> - Pavement Markings |
| Scenario | I am performing an inspection on specific item(s). <br> I open the CDS application. <br> I identify the project/contract. <br> I inspect the item(s). <br> I locate the appropriate IDR form in the system. <br> If appropriate, I attach completed sketches, calculations, photos, and various other forms to the IDR. <br> I enter my findings in the CDS application. <br> I enter the date the work occurred for each item. <br> Anytime a bituminous item's quantity is paid, I must input the JMF utilized. <br> I submit the IDR when it has been completed. |
| Post Conditions | - The IDR is submitted in a "ready for review" status. <br> - The IDR is available for review by the CDS Operator/CM. |

## References:

General Construction — Form PTC 371
Bituminous Pavement Quality Control - Form PTC 374A/B
Concrete Placement Quality Control - Form PTC 375
Maintenance and Protection of Traffic - Form PTC 376
Pavement Markings - Form PTC 376P
Labor \& Equipment - Form PTC 372

| Name: | 3. Modify an IDR that is returned for correction |
| :--- | :--- |
| Primary <br> Actor(s) | Inspector |
| Secondary <br> Actors(s) | CDS <br> CDS Operator |
| Preconditions | I am assigned to a given contract. <br> I submitted an IDR for a previous day. <br> The CDS Operator has not approved the IDR and has returned it for correction. |
| Scenario | I open the CDS application. <br> I identify the project/contract. <br> I identify the IDR that has been returned. <br> I review the comments made by the CDS Operator. <br> I make the required changes to the IDR if applicable. <br> If the comments suggested are not applicable, they are removed/rejected. Then, the status <br> can be changed and the IDR is resubmitted. <br> If applicable, I submit the IDR when it has been completed. |
| Post Conditions | The IDR is submitted in a "ready for approval" phase. <br> The IDR is available to be reviewed by the CDS Operator. |


| Name: | 4. Create a new Plan Location |
| :--- | :--- |
| Primary <br> Actor(s) | Inspector |
| Secondary <br> Actors(s) | CDS |
| Preconditions | I review the Actual Stations/Mile Posts recorded to ensure that they do not fall within an <br> existing Plan Location. <br> The recorded Actual Stations/Mile Posts cannot be entered under an existing Plan Location. |
| Scenario | I open the CDS application. <br> I identify the project/contract. |
| I create a new Plan Location under any existing item number or Work Authorization |  |
| •The content of the IDR may be entered completely and immediately. <br> The CDS Operator/CM can easily see that I have created a new Plan Location to <br> verify that it is warranted. <br> The information entered into the new Plan Location can easily be copied to an <br> existing Plan Location by the CDS Operator/CM if found that a new location was <br> not warranted. (I am notified that this has occurred) <br> Any new Plan Location is automatically included into any report containing such <br> data including payments/work history. <br> CDS determines (if a quantity was entered) whether a Change Authorization is <br> required to be generated based on current overrun/underrun guidelines. |  |


| Name: | 5. Add a New Item of Work |
| :---: | :---: |
| Primary <br> Actor(s) | Inspector |
| Secondary <br> Actors(s) | CDS |
| Preconditions | The contractor is required to work on an activity that is not accounted for in a bid item of work for the contract. <br> No item exists for the work performed. |
| Scenario | I open the CDS application. <br> I identify my project/contract. <br> I add the new item data. |
| Post Conditions | - CDS identifies this item to be numbered accurately later or possibly to be associated with an external invoice. <br> - All of the same IDR fields are available as if it was an existing item of work. <br> - CDS records the activity even if it has a payment. <br> - This temporary item is available for Change Order selection in the immediate future. |


| Name: | 6. Force Account Daily Sign Off (DSO) |
| :--- | :--- |
| Primary <br> Actor(s) | Inspector |
| Secondary <br> Actors(s) | CDS |
| Preconditions | A Change Authorization was issued to track work on a Force Account Basis. |
| Scenario | I access the CDS Application <br> I identify the Project/Contract <br> I complete all necessary information on the FA DSO. <br> Required signatures are obtained. |
| Post Conditions | All FA Reports can be initially auto-generated via CDS (CS-4347 forms) |


| Name: | 7. Generate/Modify Contract Calendar |
| :--- | :--- |
| Primary <br> Actor(s) | CDS Operator |
| Secondary <br> Actors(s) | CDS |
| Preconditions | Contract has been setup within CDS including all dates and milestones |
| Scenario | I access the CDS Application <br> I identify the Project/Contract <br> I indicate restrictive periods including holiday shut downs or other notes to the calendar. |
| Post Conditions | The data is saved and remains editable. |


| Name: | 8. Complete a material receipt for an item |
| :--- | :--- |
| Primary <br> Actor(s) | Inspector |
| Secondary <br> Actors(s) | CDS |
| Preconditions | I am assigned to a given contract. <br> The contract I am assigned to has received materials for construction. <br> Note: minimum requirement is for delivery to include a digital copy of the bill(s). Multiple <br> deliveries will likely be combined into one receipt. Details to be worked out during design <br> of new CDS. |
| Scenario | I open the CDS application. <br> I identify the project/contract. <br> I generate a new Material Receipt. <br> I complete the Material Receipt, ensuring that the correct materials for the item have been <br> received by the contractor. |
| Post Conditions | • The Material Receipt is stored in CDS. |


| Name: | 9. Create a deficiency observed for an item/document |
| :--- | :--- |
| Primary <br> Actor(s) | Inspector |
| Secondary <br> Actors(s) | CDS |
| Preconditions | I am assigned to a given project/contract. <br> I have observed an incomplete work item or missing document from the contractor. |
| Scenario | I open the CDS application. <br> I identify the project/contract. <br> I create a new Deficiency / Punchlist record. <br> I record the missing items, tasks, or documents. <br> I set the status to unresolved. |
| Post Conditions | • The Deficiency is stored in CDS. |


| Name: | 10. Update a deficiency observed for an item/document |
| :--- | :--- |
| Primary <br> Actor(s) | Inspector |
| Secondary <br> Actors(s) | CDS |
| Preconditions | I am assigned to a given project/contract. <br> I have investigated a previously recorded deficiency. |
| Scenario | I open the CDS application. <br> I identify the project/contract. <br> I open the appropriate Deficiency / Punchlist. <br> I update the status based on my observation: <br> $\bullet \quad$ "In Progress" |
| • "Resolved" |  |
| • "Complete." |  |


| Name: | 11. Wage Rate Interview - Initiation |
| :--- | :--- |
| Primary <br> Actor(s) | Inspector |
| Secondary <br> Actors(s) | CDS <br> CDS Operator |
| Preconditions | I am assigned to a given contract. <br> Contractor staff is/are working on site. <br> Wage rate interview(s) is/are required. |
| Scenario | I open the CDS application. <br> I identify the project/contract. <br> I conduct the wage rate interview. <br> I collect field signatures, comments, complaints. |
| Post Conditions | $\bullet \quad$ CDS Operator completes the WRI. |


| Name: | 12. Construction Stormwater Inspection |
| :---: | :---: |
| Primary <br> Actor(s) | Inspector (or designee) |
| Secondary <br> Actors(s) | $\begin{aligned} & \hline \text { CDS } \\ & \text { PCS } \\ & \hline \end{aligned}$ |
| Preconditions | A project requires stormwater inspection One of the following occurs: <br> - A week has passed since the prior inspection <br> - Measurable rainfall occurred in the past 24 hours |
| Scenario | I open the CDS application <br> I identify the project/contract <br> I locate the appropriate stormwater inspection form <br> I enter my findings in the CDS application <br> I may attach photos or other documents (remedial drawings) |
| Post Conditions | - CDS saves the information <br> - The stormwater inspection is submitted in a "ready for review" status. <br> - The report is available to be reviewed by the CDS Operator/CM |

Note: post-condition approvals will execute similar to the approvals used for Use Case \#1.
References:
NON-NPDES/E\&S Visual Inspection Report
3800-FM-BCW0271d Inspection Report

## CDS Operator Scenarios

These scenarios pertain to the "CDS Operator" role. The CDS Operator reviews IDRs and other business information and performs quality review on the information.

## General Administrative Activity

These scenarios pertain to general functions needed to maintain the status of a contract/project.

| Name: | 13. Assign an inspector to a project/contract |
| :--- | :--- |
| Primary <br> Actor(s) | CDS Operator |
| Secondary <br> Actors(s) | CDS |
| Preconditions | I am assigned to a given contract. <br> An inspector has been assigned to the project/contract. <br> The inspector exists in the CDS application. <br> (If the inspector does not exist in the application, the system administrator is to be notified) |
| Scenario | I open the CDS application. <br> I identify the project/contract. <br> I identify the inspector within the application. <br> I (activate) assign them to the project/contract. <br> I set the start date for the assignment. |
| Post Conditions | • The inspector is now assigned to the project/contract in CDS. |


| Name: | 14. Un-assign an inspector from a project/contract. |
| :--- | :--- |
| Primary <br> Actor(s) | CDS Operator |
| Secondary <br> Actors(s) | CDS |
| Preconditions | I am a CDS Operator. <br> An inspector has left the project/contract. |
| Scenario | I open the CDS application. <br> I identify the project/contract. <br> I identify the inspector within the application. <br> I (deactivate) un-assign them from the project/contract. <br> I set the end date for the assignment. |
| Post Conditions | • The inspector is now un-assigned from the project/contract in CDS. <br> • The inspector can be readily re-assigned at any time. |


| Name: | 15. Edit Contract-wide Control Table |
| :--- | :--- |
| Primary <br> Actor(s) | CDS Operator |
| Secondary <br> Actors(s) | CDS <br> Control tables |
| Preconditions | A number of data tables contain information that seldom changes. <br> PTC has determined a value must be added, changed or deleted in a contract-wide control <br> table. |
| Scenario | I access the CDS application. <br> I identify the specific project/contract. <br> I identify the specific control table. <br> I make the required modification. |
| Post Conditions | CDS updates the control table. |

The following are the table types to be maintained at the contract level by the CDS Operator

- Bituminous Tack Coat Materials
- Bituminous JMFs
- Concrete Curing Methods
- Concrete Cylinder Curing Methods
- Concrete Delivery Methods
- Concrete Types of Work
- Concrete JMFs
- Contract Routes
- Directions
- Equipment Types
- File Folders
- Funding Sources
- Labor Types
- Measure Units
- Operation Codes
- Ramps
- Sides
- Sort Level Names
- Stages
- Test Types
- Testing Apparatus
- Work Assignment Types
- Material Producers

| Name: | 16. Adjust Commodity Prices |
| :--- | :--- |
| Primary <br> Actor(s) | CDS Operator | \left\lvert\, | Secondary |
| :--- | :--- |
| Actors(s) |$\quad$| CDS |
| :--- |
| PCS |$\quad$| I am assigned to a given contract. |
| :--- |
| I have been notified that diesel or bituminous pricing has changed. |\right.


| Name: | 17. Cost Drawdown Information |
| :--- | :--- |
| Primary <br> Actor(s) | CDS Operator |
| Secondary <br> Actors(s) | CDS <br> PCS |
| Preconditions | I have received the contractor’s projected monthly values of <br> progress for the project/contract. <br> The Construction Manager has reviewed it and found it to be acceptable. |
| Scenario | I open the CDS application. <br> I identify the project/contract. <br> I enter the projected values for each month of the contract. |
| Post Conditions | CDS saves the information. <br> $\bullet$ <br> Upload report to PCS <br> I periodically revise this table of information. <br> CDS alerts the CM when there is a variance in values exceeding the specified <br> ranges. |


| Name: | 18. Contract closeout |
| :--- | :--- |
| Primary <br> Actor(s) | CDS Operator |
| Secondary <br> Actors(s) | CDS <br> PCS <br> System Admin (for assistance) |
| Preconditions | The contractor has completed all work. <br> I have validated that the final estimate, change order, etc. have been approved. |
|  | I access the CDS application. <br> I identify the project/contract. <br> I indicate that the project should be closed. |
| I generate all completion documents requiring approval. |  |
| I route the documents for signature(s). |  |
| I note Final CO and Final Estimate as approved in CDS. |  |

References:
PTC-03-16 Completion Certification
PTC-4238 Materials Certification
Final Contract Comparison Summary Analysis Sheet
PTC-4137 Final Inspection Form
PTC - 4136A Physical Work
PTC - 4136B Required Documents
FHWA-1446A Construction Inspection Report
FHWA-1446B Final Acceptance Report
PTC-4307 Contractor’s Past Performance Report

## Daily Operator Activity

These use cases pertain to daily activity resulting in closing out a day.

| Name: | 19. Review and approve an IDR |
| :--- | :--- |
| Primary <br> Actor(s) | CDS Operator |
| Secondary <br> Actors(s) | CDS <br> Inspector |
| Preconditions | I am assigned to a given contract. <br> An inspector submits a valid IDR. |
| Scenario | I open the CDS application. <br> I identify the project/contract. <br> I identify an IDR awaiting acceptance. <br> I evaluate the IDR. <br> The IDR meets the evaluation criteria. <br> I approve it. |
| Post Conditions | • The IDR is now submitted in its final state to the database. |


| Name: | 20. Review and return an IDR |
| :--- | :--- |
| Primary <br> Actor(s) | CDS Operator |
| Secondary <br> Actors(s) | CDS <br> Inspector |
| Preconditions | I am assigned to a given contract. <br> An inspector submits an invalid or incomplete IDR with significant issues. <br> (Note: the CDS Operator / CM determines "significance.") |
| Scenario | I open the CDS application. <br> I identify the project/contract. <br> I identify IDRs awaiting acceptance. <br> I evaluate the IDR. <br> I identify incorrect or incomplete information. <br> I determine the IDR must be corrected by the inspector. <br> I record comments on these issues. <br> I update the status to "Returned" |
| Post Conditions | CDS routes the IDR to the originator. |


| Name: | 21. Review and modify an IDR |
| :--- | :--- |
| Primary <br> Actor(s) | CDS Operator |
| Secondary <br> Actors(s) | CDS <br> Inspector |
| Preconditions | I am assigned to a given contract. <br> An inspector submits an IDR with issues that are insignificant. <br> (Note: the CDS Operator / CM determines "Significance.") |
| Scenario | I open the CDS application. <br> I identify the project/contract. <br> I identify IDRs awaiting approval. <br> I evaluate the IDR. <br> I identify incorrect or incomplete information. <br> I determine the issues are insignificant. <br> I correct the information on the IDR. <br> I accept the IDR. |
| Post Conditions | • CDS clearly indicates what was changed in an easily auditable way. <br> ene IDR is submitted in its final state to the database. |


| Name: | 22. Close a day |
| :--- | :--- |
| Primary <br> Actor(s) | CDS Operator |
| Secondary <br> Actors(s) | CDS <br> Inspectors <br> PCS |
| Preconditions | I am assigned to a given contract. <br> All assigned inspectors have submitted their IDRs. <br> All IDRs have been accepted. |
| Scenario | I open the CDS application. <br> I identify the project/contract. <br> I identify IDRs for the day. <br> I verify that each assigned inspector has submitted their IDR. <br> Each IDR has been accepted. <br> I update the status to "closed". |
| • CDS generates the Master Diary for the day. |  |
| Post Conditions | CDS locks all underlying IDRs |
| • CDS identifies me as the person who generated the MD. |  |
| • CDS notifies CM for review \& acceptance of MD. |  |
| • The MD includes the signatures of the generator and approver. |  |


| Name: | 23. Reopen a day |
| :--- | :--- |
| Primary <br> Actor(s) | CDS Operator |
| Secondary <br> Actors(s) | CDS <br> Inspectors |
| Preconditions | I am assigned to a given contract. <br> A particular day was previously closed. <br> The day needs to be reopened. <br> The day is within the acceptable estimate period. |
| Scenario | I open the CDS application. <br> I identify the project/contract. <br> I identify the day that needs to be reopened. <br> I unlock the appropriate IDR(s) for editing |
| Post Conditions | • The Master Diary for that day is marked as "open". <br> • The IDRs that were unlocked for that day are now available to be added or changed. <br> Restart process from "Review and Modify an IDR" |

## Routine Maintenance Activities

These use cases pertain to actions/activities that occur independent of daily recurring activity.

| Name: | 24. Generate an estimate |
| :---: | :---: |
| Primary Actor(s) | CDS Operator |
| Secondary Actors(s) | $\begin{aligned} & \text { CDS } \\ & \text { PCS } \end{aligned}$ |
| Preconditions | I am assigned to a given contract. I wish to add a pay estimate for the previous period, e.g., monthly, semi-monthly. All days for the estimate period are closed. |
| Scenario | I open the CDS application. <br> I identify the project/contract. <br> I identify the days within the estimate period. <br> I verify (and adjust if necessary) the correct retainage percentage or value. <br> I generate a preview estimate from CDS. <br> I review it for completeness and correctness. <br> I may need to obtain physical signatures depending on contract type. <br> I cancel or submit the estimate. |
| Post Conditions | - CDS saves the estimate with "preliminary" status. <br> - The estimate is saved in the PCS or printed. <br> - Approval routing begins in PCS or is routed for physical signatures. <br> - The estimate may be recalled, deleted, or edited. <br> - CDS identifies any significant deviations from the cost drawdown. <br> - CDS notifies the Construction Manager of these deviations. <br> Note: this use case is intended to also cover "regenerate" an estimate |


| Name: | 25. Update the status of an approved estimate |
| :--- | :--- |
| Primary <br> Actor(s) | CDS Operator |
| Secondary <br> Actors(s) | CDS <br> PCS <br> PTC Approvers |
| Preconditions | There is a pending estimate in CDS <br> An estimate is fully approved <br> $\bullet \quad$ Approvals may have occurred in PCS or otherwise (commissioners) <br> I am aware that an estimate has been approved. |
| Scenario | I open the CDS application. <br> I identify the project/contract. <br> I identify the pending estimate. <br> I record the "Approved" status in CDS. <br> I record the link to PCS document. |
| Post Conditions | The estimate is updated to "Approved" status in the database. |


| Name: | 26. Create an external invoice |
| :---: | :---: |
| Primary <br> Actor(s) | CDS Operator |
| Secondary Actors(s) | CDS |
| Preconditions | An incident occurred that required the contractor to do repair work. PTC's property was damaged and PTC knows who is responsible. A new item of work (Use Case 5) exists, to be tied to an external invoice. A change authorization for this work exists. The SRM PO exists in SAP. |
| Scenario | I open the CDS application. <br> I identify the project/contract. <br> I create a new External Invoice. <br> I input the SRM PO number. <br> I attach all required information to the invoice. |
| Post Conditions | - CDS saves the external invoice, pending review. <br> - The external invoice is distributed for review. <br> - Upon completion of review, the invoice is routed for signatures. <br> - An external invoice may be recalled, deleted, or edited. <br> - CDS e-mails the external invoice, with backup to PDCLAIMS@paturnpike.com <br> - This information is saved in PCS. |


| Name: | 27. Enter DB/DBE payments |
| :--- | :--- |
| Primary <br> Actor(s) | CDS Operator |
| Secondary <br> Actors(s) | CDS <br> PCS |
| Preconditions | The monthly DB/DBE report for the prior month has not been generated. <br> I know what payments have been made based on documents submitted to PCS. |
| Scenario | I open the CDS application. <br> I identify the project/contract. <br> I create a new DB/DBE monthly report. <br> I enter the monthly payment(s) for each DB/DBE value from the report. |
| Post Conditions | • The report is uploaded to PCS. |

Reference:
EO 402R - DB/DBE Report

| Name: | 28. Process Certified Payrolls |
| :--- | :--- |
| Primary <br> Actor(s) | CDS Operator |
| Secondary <br> Actors(s) | CDS <br> PCS |
| Preconditions | I have new or revised weekly payroll certifications from prime and/or subcontractors. <br> CDS identified and listed all contractor(s) who worked for the weekly period. <br> I know the pay period at hand. <br> PCS has provided payrolls. |
| Scenario | I open the CDS application. <br> I identify the project/contract. <br> I identify the payroll week for the information to be entered. <br> I identify the contractor for the information to be entered. <br> I determine whether the Certified Payroll is acceptable. <br> I indicate that a Certified Payroll is acceptable if it complies with standards. <br> I enter comments for unacceptable Certified Payroll(s). |
| Post Conditions | Comments/Revisions may be edited at a later time <br> • Various statuses are reportable. |


| Name: | 29. Wage Rate Interview - Completion |
| :--- | :--- |
| Primary <br> Actor(s) | CDS Operator |
| Secondary <br> Actors(s) | CDS <br> PCS |
| Preconditions | I am assigned to a given contract. <br> Inspector conducted a WRI. <br> Certified payroll for identified contractor(s) has been populated into CDS for the weekly <br> period and I am alerted that the WRI form can now be completed. |
| Scenario | I open the CDS application. <br> I identify the project/contract. <br> I complete the applicable WRI with required information. <br> I note discrepancies to be addressed. |
| Post Conditions | Comments/Revisions may be edited at a later time. <br> • Upon correction of discrepancies, they can be removed. |

## CHANGE MANAGEMENT

These are CDS Operator functions related to Change Authorization and Change Order processes.

| Name: | 30. Generate a (preliminary) change authorization |
| :---: | :---: |
| Primary <br> Actor(s) | CDS Operator |
| Secondary <br> Actors(s) | $\begin{aligned} & \text { CDS } \\ & \text { PCS } \end{aligned}$ |
| Preconditions | (This process describes the creation of PTC-373) <br> I am assigned to a given contract. <br> I verified that additional/extra work beyond the base contract is required. <br> This work constitutes one of the following: <br> - Additional Work at Contract Unit Price <br> - Extra Work at an Agreed Price <br> - Extra Work by Force Account <br> - Adjustments to milestone(s) and/or completion date |
| Scenario | I open the CDS application. <br> I identify the project/contract. <br> I select/create the item(s) to be included on this Change Authorization. <br> I input the estimated quantities for each item and all other required information. <br> I may modify the milestone(s) and/or completion date. <br> I properly reference the attachments. <br> I attach all required documentation. |
| Post Conditions | - CDS generates a Change Authorization <br> - The change authorization is distributed for review. <br> - Upon completion of review, the CA is routed for signatures. (If corrections are necessary, this process is repeated.) <br> - Approval routing is based on multiple business criteria including price. <br> - The Change Authorization is saved in PCS |

Reference:
PTC 373 - Inspector's Daily Report--Change Authorization

| Name: | 31. Receive an approved Change Authorization |
| :--- | :--- |
| Primary <br> Actor(s) | CDS Operator |
| Secondary <br> Actors(s) | CDS <br> PCS |
| Preconditions | I am assigned to a given contract. <br> I have been notified that a Change Authorization has been approved. |
| Scenario | I open the CDS application. <br> I identify the project/contract. <br> I identify the applicable Change Authorization. <br> I update the Change Authorization with relevant data. |
| Post Conditions | $\quad$ CDS generates a (final) Change Authorization. |


| Name: | 32. Receive a rejected Change Authorization |
| :--- | :--- |
| Primary <br> Actor(s) | CDS Operator |
| Secondary <br> Actors(s) | CDS <br> PCS |
| Preconditions | I am assigned to a given contract. <br> I have been notified that a Change Authorization has been rejected. |
| Scenario | I open the CDS application. <br> I identify the project/contract. <br> I identify the applicable Change Authorization. <br> I update the status to deactivate or modify the Change Authorization. <br> Refer to "Generate a Change Authorization" use case to continue the process. |
| Post Conditions | • A copy of the (deactivated) Change Authorization is saved in PCS. |


| Name: | 33. Enter Concrete / Bituminous / Aggregate test data |
| :--- | :--- |
| Primary <br> Actor(s) | CDS Operator |
| Secondary <br> Actors(s) | CDS <br> PCS |
| Preconditions | I am assigned to a given contract <br> The contract has concrete / bituminous / aggregate QC/AT/VT testing data. <br> The material test type is specific to an IDR Office Letter, material type, and item reported on <br> the sample day. |
| Scenario | I open the CDS application. <br> I identify the project/contract. <br> I select the material test type <br> I enter the necessary testing results for the given material. |
| Post Conditions $\quad$CDS will calculate test results based on data entered. <br> Deficient Lot/Sublot information can be linked to an IDR readily for payment <br> purposes on a future date of entry. <br> Resulting data can apply the entered percentage of deficiency to the UP for payment <br> purposes. |  |


| Name: | 34. Provide a Review Note on past records |
| :--- | :--- |
| Primary <br> Actor(s) | CDS Operator |
| Secondary <br> Actors(s) | CDS |
| Preconditions | During a self-audit or QA audit, one or more errors are discovered. |
| Scenario | I open the CDS application. <br> I identify my project/contract. <br> I locate the past work history or payment that is in question. <br> The past entry can be during a current or previously approved periodic estimate period. <br> I type a review note that can indicate to all that corrective measures were taken and provide <br> the current date or reference that the error was mitigated. |
| Post Conditions | CDS will auto-generate in the review note the user and a date/time stamp. <br> CDS will indicate by a review flag that there is narrative contained that indicates the <br> corrective action(s) taken and when. <br> Review note is available with the past entry to view by all. |


| Name: | 35. Stored Materials |
| :--- | :--- |
| Primary <br> Actor(s) | CDS Operator |
| Secondary <br> Actors(s) | CDS <br> PCS |
| Preconditions | The Contractor has submitted a request for stored materials for an Item or Components of an <br> Item. <br> The Contractors request has been accepted in the PCS. |
| Scenario | I access the CDS Application <br> I identify the Project/Contract <br> I create a new plan location for an existing Item denoting the location is required for Stored <br> Materials |
| Post Conditions $\quad$CDS records the data. <br> The denotation creates the SM tracking feature allowing the user to record required <br> information. <br> CDS tracks the aggregate amount of all Stored Materials Payments and verifies they <br> do not exceed 25\% of the current contract amount. |  |


| Name: | 36. Generate/Update a Change Order |
| :---: | :---: |
| Primary <br> Actor(s) | CDS Operator |
| Secondary <br> Actors(s) | $\begin{aligned} & \hline \text { CDS } \\ & \text { PCS } \\ & \hline \end{aligned}$ |
| Preconditions | One or more change authorizations have been accepted. I am notified that a Change Order is to be generated. I am informed of the Change Authorizations to include. The Change Order does not already exist. |
| Scenario | I open the CDS application. <br> I identify the project/contract. <br> I create a new Change Order or choose an in-process one. <br> I select the appropriate category. <br> I select the item(s) to be included on this Change Order. <br> I establish new item(s) and incorporate actual quantities/values for this work. <br> I may modify the milestone(s) and/or completion date. <br> I may generate a no-cost Change Order without items of work. <br> I may modify the Contingency Value. <br> I answer the questions related to the Change Order and properly reference the attachments. <br> I attach all required documentation. |
| Post Conditions | - CDS saves the change order with "pending acceptance" status. <br> - CDS includes all underlying Change Authorizations in the Change Order <br> - The Change Order is distributed for review. <br> - Upon completion of review, the CO is routed for signatures. <br> - If corrections are necessary or an estimate required, this process is repeated. <br> - An electronic copy of the change order is generated and loaded into PCS. <br> - A Change Order may be recalled, deleted, or edited. |

## Construction Manager Scenarios

The Construction Manager has multiple business functions, including:

- monitors the status of items within the contract
- monitors the contractor's activities with regards to the schedule
- monitors contractor workmanship, acceptance criteria for defective work
- analyzes cost drawdown information
- monitors punch-list status
- generates change order and authorizations
- reviews master dairies
- reviews and accepts estimates
- utilizes most of the reports generated from CDS
- reviews insurance claim related information
- utilizes the Change Order What-If Analysis function
- completes an IDR daily

The Construction Manager performs these tasks using business functions defined above (Inspector Scenarios, CDS Operator Scenarios) and the functions described under the Business Intelligence heading. The Construction Manager is also involved, directly or indirectly, in all approvals related to Field Operations.

## System Admin Scenarios

These scenarios describe functions performed exclusively by a System Administrator. (System Admin has access to all of the use case scenarios for all roles.)

| Name: | 37. Contract Setup |
| :---: | :---: |
| Primary <br> Actor(s) | System Admin |
| Secondary <br> Actors(s) | CDS <br> CDS Operator / CM <br> Tab Wizard <br> EBS containg an executed contract <br> SAP <br> Facilities Program Manager eGordian |
| Preconditions | PTC or Facilities has executed a new project/contract. <br> I have reviewed / modified the item list from Tab Wizard (including either/or items). |
| Scenario | I access the CDS application. <br> I choose the appropriate type of PTC contract to set up. <br> I create a project/contract using the information from the EBS or from eGordian (choosing the applicable either/or item(s) to be eliminated). <br> I populate the required information from SAP or eGordian. <br> I import the item list into the contract or I manually type the item information into CDS. <br> I run the project setup validations. <br> I close the contract setup. <br> I grant access to the new contract as appropriate. |
| Post Conditions | - CDS saves the new construction project/contract. <br> - CDS auto-generates the applicable payment schedule for each contract mobilization, surveying and field office items appropriately. <br> - All contract information and items are and locked down (except to administrators).I return periodically to populate the approved lump sum breakdowns. <br> - CDS populates the Material Receipt Module with the contract items. <br> - CDS generates a "Material Action Plan" for QA. <br> - CDS generates a "Frequency Sheet" for QA. <br> - My multiple IDR contract entries can be linked to one of several contracts in my project with ease and without navigating out of one and into another (Facilities contract).Provide an alert (flag) to populate the Contingency value. |


| Name: | 38. Open End Type Contract Setup |
| :--- | :--- |
| Primary <br> Actor(s) | System Admin |
| Secondary <br> Actors(s) | CDS <br> CDS Operator / CM <br> EBS Interface <br> An executed Open End contract. <br> SAP |
| Preconditions | PTC has executed a new Open End project/contract. <br> Executed contract incorporated into SAP |
| Scenario | I access the CDS application. <br> I create a project/contract (An Open End has been selected.) using the information from the <br> EBS interface. <br> I populate the required information from SAP |
| I create a "Pre-determined Amount" item. |  |
| I import the item list into the contract which contains descriptions, various Unit of Measure, |  |
| prices, and quantities. |  |
| I run the project setup validations. |  |
| I enter the required contract information. |  |
| I close the contract setup and lock down all contract information and items (except to enter |  |
| future WA.). |  |
| I grant access to the new contract as appropriate. |  |


| Name: | 39. Add a new user |
| :--- | :--- |
| Primary Actor(s) | System Admin |
| Secondary Actors(s) | CDS <br> A new employee |
| Preconditions | An employee will be a new CDS user. <br> I am aware of their future role. <br> I am aware of the contract(s) they will work on. |
| Scenario | I access the CDS application. <br> I create a record with the employee's information. <br> I record their role within CDS. <br> I assign them to the appropriate projects. |
| Post Conditions | CDS records the new user and their role. <br> $\bullet$ <br> The new user is available for the CDS Operator / CM to select to add to the <br> contract <br> Note: users can work multiple projects/contracts simultaneously |


| Name: | 40. Update User Information |
| :--- | :--- |
| Primary <br> Actor(s) | System Admin |
| Secondary <br> Actors(s) | CDS <br> Any CDS user |
| Preconditions | A CDS user has a name/role/status or other change. |
| Scenario | I access the CDS application. <br> I identify the user's record. <br> I update the information on the user's record. |
| Post Conditions | CDS records the changed data. <br> $\bullet$ <br> CDS does not alter any existing records for the user prior to this edit. |


| Name: | 41. Edit System-Wide Control Table |
| :--- | :--- |
| Primary <br> Actor(s) | System Admin |
| Secondary <br> Actors(s) | CDS <br> Control tables |
| Preconditions | A number of data tables contain information that seldom changes. <br> PTC has determined a value must be added, changed or deleted in a system-wide control <br> table. |
| Scenario | I access the CDS application. <br> I identify the specific control table. <br> I make the required modification. |
| Post Conditions | $\quad$ CDS updates the control table. |

The following are the table types currently maintained at the system.

- Aggregate Classes
- Bituminous - Automatic Controls
- Bituminous - Classes
- Change Order Categories
- Change Order Types
- Concrete Beam Types
- Concrete Classes
- Concrete Status Types
- Contractor Types
- Diesel Categories
- Material Producers
- Project managers
- Signature Labels
- Weather Conditions

| Name | 42. Change Contract Status |
| :--- | :--- |
| Primary <br> Actor(s) | System Admin |
| Secondary <br> Actors(s) | CDS |
| Preconditions | A contract is no longer active for any number of reasons <br> Statuses such as "Archived" "In Claims" "Inactive" and "Final" are available. |
| Scenario | I access the CDS application. <br> I identify the specific control table. <br> I update the contract status as appropriate. |
| Post <br> Conditions | CDS restricts visibility of contracts with any status except "Active" to System <br> Administrators or Sys Admin's designee(s) |

## QA Scenarios

These scenarios pertain to the quality assurance (QA) processes.

| Name: | 43. Perform a review |
| :---: | :---: |
| Primary <br> Actor(s) | QA |
| Secondary Actors(s) | $\begin{aligned} & \text { CDS } \\ & \text { PCS } \end{aligned}$ |
| Preconditions | A review is triggered based on site activity and frequency. |
| Scenario | I open the CDS application. <br> I identify the project/contract. <br> I choose the Review Category and Review Type. <br> <Based on the Review Category and Type, CDS generates a list of topics / questions.> <br> I determine whether each question is Conforming, Non-conforming, or Not applicable. <br> I assign a rating "level" to each topic as either 1 (Non-conforming), 2 (Close to conforming, with corrections needed) or 3 (Conforming). <br> I may add comments by topic or for the review as a whole. |
| Post Conditions | - CDS stores the review. <br> - The review is available for a Summary Report. <br> - The review is distributed to the QA District Manager for review <br> - The review is available for modifications if necessary <br> - The review is routed (outside of CDS) to the appropriate party for the subject contract <br> - CDS handles manual input to indicate a response to the reviews with capability to import attached responses <br> - The QA Tech / QA Manager / PM are aware that a response has been received and/or issue is closed within CDS <br> - CDS handles additional actions/responses as required <br> - The reports/responses are available for a printable report <br> - Reports are available for upload into PCS. |


| Name: | 44. Generate a sample submission |
| :--- | :--- |
| Primary <br> Actor(s) | QA |
| Secondary <br> Actors(s) | CDS <br> PCS |
| Preconditions | I am scheduled to take a sample of an item. <br> I have lifted the appropriate sample(s). |
|  | I open the CDS application. <br> I identify the project/contract. <br> I record the item for which I have lifted this sample. <br> I complete the required information. |
| Pcenario | • The sample report is available for a Summary Report. <br> • The sample report is distributed to the QA District Manager for review <br> • The sample report is available for modifications if necessary |


| Name: | 45. Generate a Summary Report |
| :--- | :--- |
| Primary <br> Actor(s) | QA |
| Secondary <br> Actors(s) | CDS <br> PCS |
| Preconditions | I have completed a review and/or a sample |
|  | I open the CDS application. <br> I identify the project/contract. <br> I identify the review(s) and/or the sample(s) to include in my report |
| Scenario | • The Summary Report is distributed to the QA District Manager for review <br> • The Summary Report is available for modifications if necessary <br> • The Summary Report is available for a printable report <br> Peports are available for upload into PCS |


| Name: | 46. Generate a Materials Action Plan |
| :--- | :--- |
| Primary <br> Actor(s) | QA |
| Secondary <br> Actors(s) | CDS <br> PCS |
| Preconditions | Contract setup is complete |
| Scenario | I open the CDS application. <br> I identify the project/contract. <br> I identify the item(s) and/or item location(s) to develop the Action Plan. <br> I identify the specific material frequency for each item. |
| Post Conditions | CDS will auto-generate the frequency criteria based on the information selected. <br> The Material Action Plan Report is available and will update with reviewed sample <br> date(s) as performed within CDS. <br> Reports are available for upload into PCS. |


| Name: | 47. Update a sample submission with lab results |
| :--- | :--- |
| Primary <br> Actor(s) | QA |
| Secondary <br> Actors(s) | CDS <br> PCS |
| Preconditions | The offsite testing lab sample results were distributed to me. |
|  | I open the CDS application. <br> I identify the project/contract. <br> Scenario <br> I identify the item, material and sample(s). <br> I input/update the results from the testing lab. |
| Post Conditions | • CDS indicates when test results exceed the action point parameters. <br> $\bullet$ <br> $\bullet$$\quad$CDS saves the information. <br> • Reports are available for upload into PCS |


| Name: | 48. Perform a Periodic Estimate Audit |
| :--- | :--- |
| Primary <br> Actor(s) | QA Audit Staff |
| Secondary <br> Actors(s) | CDS <br> PCS |
| Preconditions | I am a QA Auditor <br> I am auditing a contract that contains approved Periodic Estimates. |
| Scenario | I open the CDS application. <br> I identify the project/contract. <br> I identify my Statistical Audit form. <br> I identify the type of audit. <br> I identify the estimate(s) and item(s) to be audited. <br> I ascertain whether the actual values comply with the "calculated" values displayed <br> I indicate appropriate statuses and narrative based on my findings |
| Post Conditions | • The audit report is distributed to the QA District Manager for review <br> • The reports/responses are available for a printable report <br> Reports are available for upload into the PCS |

## Non-Routine Scenarios

These scenarios can occur, on an as-needed basis. Some of them occur as workarounds for constraints in the current business process.

| Name: | 49. Complete an IDR on behalf of an inspector. |
| :--- | :--- |
| Primary <br> Actor(s) | CDS Operator |
| Secondary <br> Actors(s) | CDS <br> Paper IDR (if available) <br> Inspector |
| Preconditions | I am assigned to a given contract. <br> An inspector completed an IDR in paper form. <br> There may be reasons that I am authorized to enter the IDR. <br> An inspector has submitted a paper IDR for review. |
| Scenario | I open the CDS application. <br> I identify the project/contract. <br> I create an IDR in the same way that an inspector would. <br> I have the ability to enter the inspector's name in the "Inspector" field. |
| Post Conditions | •The IDR is submitted in its final state to the database. |


| Name: | 50. Document planned absences for contract personnel. |
| :--- | :--- |
| Primary Actor(s) | CDS Operator |
| Secondary <br> Actors(s) | CDS |
| Preconditions | I am assigned to a given contract. <br> One or more staff did not work on a specific day. <br> I need to close the day. |
| Scenario | I open the CDS application. <br> I identify the project/contract. <br> I identify IDRs submitted for the day. <br> I generate an "absent" IDR for all personnel that I know for a fact did not work that day. |
| I indicate the proper status for the staff member(s) and it is indicated in various reports in |  |
| CDS (e.g. - Holiday, Vacation, etc.). |  |


| Name: | 51. Indicate Hiatus in Construction Schedule |
| :--- | :--- |
| Primary <br> Actor(s) | CDS Operator |
| Secondary <br> Actors(s) | CDS |
| Preconditions | I am assigned to a given contract. <br> The assigned contract plans to suspend operations. |
| Scenario | I open the CDS application. <br> I identify the project/contract. <br> I define the start/stop dates for the suspended period. |
| Post Conditions | $\bullet$ <br> CDS records the dates of planned inactivity. <br> CDS generates a Master Diary for the inactive period. |

## Workflow/Integration Use Cases

These use cases focus on process and workflow. They are intended to describe some of the mechanics in the workflow, focused on the underlying business process. The actual workflow may change in the new environment; this narrative describes current interaction from a business systems’ perspective.

## Project Initiation

| Name: | 52. Project Initiation (EBS, PCS, TabWizard, SAP) |
| :--- | :--- |
| Originating <br> System | EBS, PCS, TabWizard, SAP |
| Receiving <br> System | CDS |
| Preconditions | A new contract has been executed (EBS). <br> Line items have been culled (TabWizard Export and EBS Export) <br> Positions/approvers have been assigned (PCS) |
| Scenario | A System Admin opens the CDS application. <br> A new project and/or a new contract is created (Use Case 37, linked to external source(s). <br> Import the contract plans, fund codes, and operation codes from the TabWizard. <br> Import the bid prices from the EBS. <br> Enter contract dates from SAP. <br> Enter Lump Sum Breakdowns from the PCS. |
| Post Conditions | CDS imports all relevant data structures. <br> This occurs in a shared (internal network) environment. |

## Time-Related Events

| Name: | 53. End of Pay Period (CDS, PCS) |
| :--- | :--- |
| Originating <br> System | CDS |
| Receiving <br> System | PCS |
| Primary Actor(s) | CDS Operator |
| Preconditions | Payment period occurs. |
| Scenario | I close the final day of a pay period (Use Case 22) <br> I generate a pay estimate (Use Case 24) |
| Post Conditions | An electronic version of the payment estimate is uploaded to the PCS. <br> PCS stores the payment estimate. <br> PCS initiates an acceptance process. <br> The estimate can be recalled, voided, or deleted. A new version can be initiated into the <br> process. |


| Name: | 54. End of Pay Period (PCS, SAP) |
| :--- | :--- |
| Originating <br> System | PCS, CDS |
| Receiving <br> System | SAP |
| Primary <br> Actor(s) | CDS Operator |
| Preconditions | A pay estimate has been generated in CDS (Use Case 24) <br> A pay estimate has routed through the PCS (Use Case 25) <br> All acceptances have occurred in PCS. |
| Scenario | Within CDS, I update the pay estimate to "Approved" <br> The "Approved" estimate with signatures is generated in CDS, uploaded to the PCS, and sent <br> to the CAB (Central Administration Building). |
| Post Conditions | The information from the "Approved" estimate is manually entered into SAP. Note: <br> Commission approval is required before an estimate can be paid. |


| Name: | 55. Daily Master Diary (PCS) |
| :--- | :--- |
| Originating <br> System | CDS |
| Receiving System | PCS |
| Primary Actor | CDS Operator |
| Preconditions | I have closed a work day (Use Case 22). |
| Scenario | When the day is closed, CDS creates the Master Diary (below) |
| Post Conditions | CDS generates an electronic version of the Master Diary. <br> Signatures are obtained by the inputter and the reviewer. <br> CDS Operator uploads the Master Diary to the PCS. |

## Unplanned Events

| Name: | 56. Change Authorization (PCS) |
| :--- | :--- |
| Originating <br> System | CDS |
| Receiving <br> System | PCS |
| Primary <br> Actor(s) | CDS Operator |
| Preconditions | An unplanned event prompts a Change Authorization. |
| Scenario | I have initiated a change authorization in CDS (Use Case 30) |
| Post Conditions | An electronic version of the change authorization is generated from CDS. <br> Signatures are obtained outside of the system. <br> The change authorization is uploaded to the PCS. |


| Name: | 57. Change Order (PCS) |
| :--- | :--- |
| Originating <br> System | CDS |
| Receiving <br> System | PCS |
| Primary <br> Actor(s) | CDS Operator |
| Preconditions | A Change Order is ready to be processed. (Use Case 36) |
| Scenario | I have initiated a change order with one or more change authorizations (Use Case 31) |
| Post Conditions | An electronic version of the Change Order is generated from CDS. <br> Signatures are obtained outside of the system. <br> The Change Order is uploaded to the PCS. <br> The "Approved" Change Order is sent to the CAB (Central Administration Building). <br> Once approved by the commission, the approved Change Order is uploaded to the PCS. <br> CDS Operator / CM marks the Change Order as approved in CDS. |

## QA/Lab Integration

These scenarios pertain to integration with one or more external labs involved in testing samples lifted from the construction site. Processes are currently all manual.

| Name: | 58. Submit a Sample to the Lab |
| :--- | :--- |
| Originating <br> System | CDS |
| Receiving <br> System | Commercial laboratory (third party) |
| Primary <br> Actor(s) | QA team |
| Preconditions | Samples lifted from the field by QA. <br> CDS generated sample submission sheet(s). |
| Scenario | I put it in/affix it to the sample(s). <br> I deliver the sample(s) to the lab. |
| Post Conditions | Sample(s) tested. |


| Name: | 59. Receive Lab Results |
| :--- | :--- |
| Originating <br> System | Commercial laboratory (third party) |
| Receiving <br> System | CDS |
| Primary <br> Actor(s) | QA team |
| Preconditions | Lab has completed testing on samples |
| Scenario | Lab provides testing results electronically <br> QA team inputs testing results into CDS <br> (Automation may be possible to replace manual data entry) <br> Upon entry of test results into CDS (manual or otherwise), the program generates the invoice <br> for the third party testing. |
| Post Conditions | Testing results are stored in CDS <br> Testing Lab invoice can be generated from CDS. |

## Project/Contract Completion

| Name: | 60. Project/Contract Close-Out |
| :--- | :--- |
| Originating <br> System | CDS |
| Receiving <br> System | PCS |
| Primary <br> Actor(s) | CDS Operator |
| Preconditions | The project/contract is ready to be closed (Use Case 18) |
| Scenario | Completion documents are generated within CDS. |
| Post Conditions | Project / contract is marked as final within CDS. <br> Completion documents are uploaded and stored in the PCS. <br> The "Approved" final documents are sent to the CAB (Central Administration Building). <br> Once approved by the commission, the approved final documents are uploaded to the PCS. |

## Other Technical/Functional Scenarios

| Name: | 61. Work in a disconnected mode |
| :---: | :---: |
| Primary <br> Actor(s) | Inspector / QA |
| Secondary <br> Actors(s) | CDS |
| Preconditions | I am assigned to a given contract. I have no Internet access at the work site. |
| Scenario | I access a limited function CDS. <br> - Access to all contract data as of last synchronization is required. I complete any of the following activities: <br> - Complete an IDR associated with items for a contract <br> - Complete an IDR not associated with items for a contract <br> - Complete a Material Receipt for an Item <br> - Create a Deficiency observed for an item <br> - Create a change authorization <br> - Populate material test data <br> - Complete a QA review report <br> - Complete a QA sample report <br> - Complete a QA summary report <br> - Complete a wage rate interview <br> I return to a location with Internet connectivity. |
| Post Conditions | - My activity is recorded in the central CDS <br> - I will be aware of this synchronization |


| Name: | 62. Approval Process |
| :---: | :---: |
| Originating System | $\begin{aligned} & \text { CDS } \\ & \text { PCS } \end{aligned}$ |
| Receiving <br> System | $\begin{aligned} & \text { CDS } \\ & \text { PCS } \end{aligned}$ |
| Primary <br> Actor(s) | Any stakeholder |
| Preconditions | A document or transaction requires approval. An approval process, based on user roles on a project/contract. CDS maintains an audit trail of all transactions. |
| Scenario | The scenario is designed to cover an approval/routing process. <br> "Signature" means positive affirmation by an individual, conceivably by: <br> - Completing a transaction in CDS, such as "Save" <br> - Clicking a button in CDS, such as "I hereby approve..." <br> - Completing an e-signature in PCS, using DocuSign <br> - Physically signing a document, such as commissioners' approval <br> Scenarios include all of the following: <br> 1. Approval occurs fully within CDS, e.g., IDR review and approval <br> 2. Approval occurs within CDS, with the "signature" visible on a document stored in PCS <br> 3. Approvals occur outside CDS |
| Post Conditions | Stakeholders are aware that approvals (or rejections) have occurred. CDS is aware of proper routing for approvals, and which form is appropriate. |

## Business Intelligence

Stakeholders at all levels need access to information contained in CDS and PCS. In general, CDS currently outputs information in the form of reports, summarized below. Copies of these reports appear in Appendix 2.

| Report Category | Count |
| :--- | ---: |
| Change Orders | 10 |
| Contract Progress | 5 |
| DBE/DB | 3 |
| Enterprise | 20 |
| Estimates | 7 |
| Final Inspection | 5 |
| Item Book | 10 |
| Management Reports | 7 |
| Master Diary | 13 |
| Materials Log | 10 |
| Open End | 2 |
| Payroll | 1 |
| Plan Locations | 4 |
| Price Adjustment | 10 |
| QA | 14 |
| QC | 9 |

# Appendix K-1 - RFP 19-40120-8569 

# CONSTRUCTION DOCUMENTATION SYSTEM (CDS) USE CASES 

## Attachment 1: CDS Forms

Version 1.2
February 21, 2019

Attachment 1: Forms

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## Appendix 1: Forms

This section includes PTC forms that are referenced in the CDS use cases.

## PTC 370A/B Inspector's Daily Report - Project Activities



Forms -Section 100 -
PTC 370A \& 370B InsF

## PTC 371 Inspector's Daily Report - General Construction

## PTC 372 Inspector's Daily Report - Labor Equip Worksheet

Forms -Section 100 -
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PTC 373 Inspector's Daily Report--Change Authorization


PTC 373 Inspector's
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PTC 374A/B Inspector's Daily Report - HMA Bituminous Pavement QC


Forms - Section 100 - Forms - Section 100 -
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## PTC 375 Inspector's Daily Report - Concrete Placement QC

## PTC 376 Inspector's Daily Report - MPT

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Forms - Section 100 -
PTC-4238A Commissic

## PTC 4307 Contractor's Past Performance Report

## EO-402R Monthly DBE DB Monthly Status Statement

## PTC 03-16 Completion Certificate



Certificate PTC-03-16

## Final Contract Comparison Summary Analysis Sheet



Final Contract
Comparison and Su

## FHWA 1446A Construction Inspection Report


fhwa1446a.pdf

## FHWA 1446B Final Acceptance Report



# NON-NPDES/E\&S Visual Inspection Report <br>  <br> NON-NPDES E\&S <br> Visual Inspection Re 

## 3800-FM-BCW0271d Inspection Report



3800-FM-BCW0271
d Inspection Report

# Appendix K-2 - RFP 19-40120-8569 

# CONSTRUCTION DOCUMENTATION SYSTEM (CDS) 

## USE CASES

## Attachment 2: CDS Reports

## Version 1.1

February 21, 2019

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## Change Authorization Summary <br>  <br> Change <br> Authorization Sumn



## Change Order (with Item Remarks)



Change Order - ACE Change Order Summary Book

Change Order -
ACE Change Order S

## Change Order Approved Item Summary



Change Order
Approved Item Sumi

## Change Order Justification (8 Questions)

pof

Change Order
Justification (8 Ques

## Change Order Justification (8 Questions) - Blank

## Change Order Summary

Change Order What If Analysis
pof

Change Order
What If Analysis.pdf

## Contract Progress

## Contract Summary

Summary.pdf

## Contract Summary - Systemwide by Contract



Contract Summary -
Systemwide by Cont

## Control Number Work Progress Summary



Control Number
Work Progress Sumi

## Current Item Values and Quantities



Current Item Values and Quantities.pdf

## Work Progress Summary

## DBE/DB

## DBE/DB Contract Status

## DBE/DB Monthly Status EO-402



DBE-DB Monthly
Status EO-402.pdf

## DBE/DB Payment Detail

## Enterprise-Enterprise

## Change Order <br> pof <br> Enterprise - Change <br> Order.pdf

## Change Order - With Item Detail



Order - With Item D

## Change Order Summary

$\qquad$

Enterprise - Change
Order Summary.pdf

## Contractors Per Contract



Enterprise -
Contractors Per Con

## Contracts Per Contractor



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Contracts Per Contri

## Contracts Per Inspector



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Contracts Per Inspec

## Cost Projection Cash Flow Summary



Enterprise - Cost
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## DBE/DB



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## DBE/DB - Data Dump



Enterprise - DBE-DB

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## Inspectors Per Contract



Enterprise -
Inspectors Per Contı

## Material Receipts - Data Dump



Enterprise -
Material Receipts - [
Monthly Estimate Summary with Cost Drawdown Chart - Systemwide by Contract bip

Monthly Estimate
Summary with Cost

## Enterprise - Resource Management

Task Hours By Contract
PoF

Resource
Management - Task

## Task Hours By Contract - With Day Detail



Resource
Management - Task
Task Hours By Work Assignment
Pof

Resource
Management - Task

## Hours By Work Assignment - With Day Detail



Resource
Management - Task

## Total Hours By Contract



Resource
Management - Total

## Total Hours By Contract - With Day Detail



Resource
Management - Total
Total Hours By Role
PDF

Resource
Management - Total
Total Hours By Role - With Day Detail


Resource
Management - Total

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## Cost Drawdown

## pof <br> Cost

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## Cost Drawdown - Systemwide by Contract



Cost Drawdown -
Systemwide by Cont

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Certificate PTC-03-16

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Comparison and Su

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## Auditor Item Book <br>  <br> Auditor Item Book.pdf

## Control Number Auditor Item Book



Control Number
Auditor Item Book.p

## Control Number Item Book



## Control Number Item Book - Condensed



Control Number Item Book - Conden

## Control Number Item Book - Condensed By Date <br>  <br> Control Number <br> Item Book - Conden

## Control Number Work History Item Book

bof

Control Number
Work History Item B

## Item Book



Item Book - Condensed


Condensed.pdf

## Item Book - Condensed By Date



Item Book -
Condensed By Date

## Work History Item Book

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Work History Item
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## Operation Code By Route Cost Summary Report

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System-level
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## Master Diary

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Attachment
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## Bituminous IDR



## Concrete IDR



Concrete IDR.pdf

## FID Personnel



FID Personnel.pdf

## General IDR

Inspector Daily


Inspector Daily.pdf

## Master Diary

## Master Diary Cover Sheet



Master Diary Search


Master Diary
Search.pdf

## Material Receipts



Material
Receipts.pdf

## MPT IDR



MPT IDR.pdf

## Project Activity IDR

 IDR.pdf

## Work Assignment



Assignment.pdf

## Materials Log

## Bituminous Compaction Summary

PDF

Bituminous
Compaction Summa

## Bituminous JMF



## Concrete Cylinder Summary



Concrete Cylinder
Summary.pdf

## Concrete Cylinder Worksheet



Concrete Cylinder
Worksheet.pdf

## Concrete JMF



Concrete JMF.pdf

## Concrete Tracker



Concrete
Tracker.pdf

## Concrete Tracker (Air/Slump/Temp) Report

Concrete Tracker (Air-Slump-Temp) Re

## Contract JMF Summary

## Soil/Aggregate Sample Report

This is a rarely used function. The formatted report would contain the data fields in the attached screenshot


## System-level JMF Summary



System-level JMF
Summary.pdf

## Open End

## Open End Item Book



Open End Item
Book.pdf

## Open End Plan Location

## Payroll

## Certified Payroll

## Plan Locations

## Control Number Plan Location



Control Number
Plan Location.pdf

## Plan Location

## Plan Location - Condensed

Plan Location -
Condensed.pdf

## Plan Location Change Quantity Report (for new Plan Locations)



Plan Location
Change Quantity Re

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## Bituminous Price Adjustment - Detail



Bituminous Price
Adjustment - Detail.

## Bituminous Price Adjustment - Summary



Bituminous Price
Adjustment - Summa

## Bituminous Price Adjustment Forecast Summary

## Bituminous Price Adjustment Summary - Existing Months



Adjustment Summar

## Diesel Price Adjustment - Adjusted Payment History

## Diesel Price Adjustment - Detail



Diesel Price
Adjustment - Detail.

## Diesel Price Adjustment - Summary



Diesel Price
Adjustment - Summi

## Diesel Price Adjustment Forecast Summary



Adjustment Forecas

## Diesel Price Adjustment Summary - Existing Months



Diesel Price
Adjustment Summar

## QA

## QA Aggregate/Soil Sample Report

Clone of the corresponding Materials Log report

## QA Bituminous Compaction Summary

Clone of the corresponding Materials Log report

## QA Bituminous Sample Report



## QA Bituminous Tracker

## QA Concrete Cylinder Summary

Clone of the corresponding Materials Log report

## QA Concrete Cylinder Worksheet

Clone of the corresponding Materials Log report

## QA Concrete Sample Report



QA Concrete
Sample Report.pdf

## QA Concrete Tracker

Clone of the corresponding Materials Log report

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## QA Review Details With Checklist

## QA Review Summary



Summary Report.pd

## QA Sample Frequency



QA Sample
Frequency.pdf
QA Sample Summary


Summary Report.pd

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## QC (These are clones of QA reports)

QC Aggregate/Soil Plant Report
QC Bituminous Compaction Summary
QC Bituminous Plant Report
QC Bituminous Tracker
QC Concrete Cylinder Summary
QC Concrete Cylinder Worksheet
QC Concrete Plant Report
QC Concrete Tracker
QC Sample Summary

# Construction Documentation System 

Millenium Edition

v2.1.07



Prepared by:
ENGINEERING / CONSTRUCTION
Project Collaboration Documentation System Team

First Edition 2018


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Log In:
Launch CDS
Enter a username and a password and select "OK"
Username default: First initial \& last name Ex: JSMITH

If you do NOT have a login, contact your CDS Operator or CDS Coordinator


Select the "Advanced" arrow and verify that the correct server name is selected

Refer to the Navigation Guide for more details and/or if server is not listed


Select "Ok" to log-in

## ＂Open a Project／Contract＂window will open

## Select a Contract

If there are not any existing contracts or the correct contract is not listed，verify the correct server name has been selected or see＂Project Setup＂section

| C－CDSme Field Office |  |  |  |  | X |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Open a Project／Contract．． |  |  |  |  |  |
| 2 | Contracts |  |  |  |  |
|  | Project No． | Contract No． | Contract Name | Status |  |
| － | EN－00027 | EN－00027－03－04 | Open－End Signing－West，MP 0－245 | ACTIVE | $x$ |
|  | EN－00027 | T－060．00R001－3－14 | For CDS Manual | ACTIVE | $x$ |
| 樖 | S－006．00X002 | S－006．00X002－3－04 | Construction of Toll 576 Bridges SB－200 \＆SB－201 | ACTIVE | $x$ |
| 䀎 | T－206．00T001 | T－206．00T001－3－02 | Roadway \＆Bridge Reconstruction MP 206．89－210．92 | ACTIVE | $x$ |
| d | T－220．00T001 | T－220．00T001－3－04 | ROADWAY \＆BRIDGE RECONSTRUCTION MP 220．30－226．72 | ACTIVE | $x$ |
| 水 | T－355．00P001 | T－355．00P001－3－13 | ｜－276／／－95 Interchange Reconstruction Ramp D－10 | ACTIVE | $x$ |

Create a New Project／Contract．．．

## New Project．．

 New Contract．．Delete Project．
Open．．．

Lock symbol indicates that the setup is complete for the contract and can no longer be edited

Project Setup:
Select either "New Project" or "New Contract"
"New Project": Used to create a new project and contract when neither exist

## A project can have multiple contracts

"New Contract": Used to create a new contract when a project already exists
Refer to "New Contract - Under an Existing Project" section for details


## New Project:

Select "New Project" and "Contract - Project" will open
Enter the project information (\#1)
Once completed, the "Save" button becomes activated for selection (\#2)
After saving, the "Add" button becomes activated for selection (\#3)
Enter "Location(s)" information (\#4)

"*Items in italics are required for setup close" but not required to close the screen throughout entire project setup process (You can return to setup menus to edit or add information prior to locking down the contract)

Select "Ok" to save \& close

## Contract:

Select the "Contract" module (\#1) to open "Contract - Contract" window
Enter contract information (\#2)
Typically the selected "Contract Type" should be "Standard PTC Contract"

For an "Open End Contract", complete the following fields (CM/CI, Prime Contractor, and Dates) with exception of the "Item List" procedure
"Contract Name" is an abbreviated version of the "Detail Description"

Once completed, the "Save" button becomes activated for selection (\#3)
After saving, the "Add" buttons become activated for selection (\#4 \& \#6)
Note: "CM/CI", "Prime Contractor", "Dates", and "Item List" menu buttons also become active after saving

Enter "Location(s)" information (\#5)
Add "Federal Project \#" if applicable (\#6)


Select "Ok" to save \& close

CM/CI:
Select the "CM/CI" module (\#1) to open "CM/CI" window
Enter all available information (\#2)
This can be updated throughout the life of the contract via the "Contract
Maintenance" module


Select "Ok" to save \& close

Prime Contractor:
Select the "Prime Contractor" module (\#1) to open "Prime Contractor" window

Enter all available information (\#2)
The Business Partner Identification Number ("BPID") can be found in PennDOT's ECMS website

This can be updated throughout the life of the contract


Select "Ok" to save \& close

Dates:
Select the "Dates" module (\#1) to open "Dates" window
Enter all available information (\#2)
The "Revised Scheduled Completion" date is populated from an approved Change Order containing a modification of time
"Semi-Final Inspection", "Final Inspection", and "Acceptance" can be updated throughout the life of the contract


Select "Ok" to save \& close

Item List:
Contact a CDS Coordinator to determine if there is a plan tab import, or if the plan items and locations will be manually entered

Plan tab import prepopulates items and their plan locations which will then be reviewed for accuracy and additional editing

At this time, if setting up the "Item List" for an "Open End Contract", refer to the "Open End Contract Setup" section

## Plan Tab Import:

If plan tabs have been imported, select the "Item List" module to open "Item List" window


Unit Price Items
Select an Item and the "Plan Item/Location" window will open
"Operation Code": select from dropdown menu (\#1)
"NG" (Not Given) fields are not acceptable anywhere and need edited
"Unit Price": A separate import function or can be manually entered (\#2)
"Eligible for MPT IDR?"/"Certs Required": Select if applicable (\#3)
"Unbalanced Quantity": Must be balanced to zero to close contract (\#4)
If this number is not zero, review each individual plan location and its quantities, and edit as required. It may be necessary to add new location(s) with value(s) to correctly balance. Refer to the Lump Sum example to follow for more balancing details.

"Re-order"/"Re-number": (\#1)
"Reorder" will sort the Plan Locations based upon a predefined order of field headings This will occur automatically after seleting "Ok" or "Save"

## Editing or adding Locations could potentially change the sort order

"Renumber" will assign numbers sequentially starting with "001"
This should be completed after all editing and reordering
"Dir"/"Side": Use dropdown menu to select data as needed (\#2)
If there is data in the "Side" field, a "Direction" is required and "NG" is not permissable
"Add": Inserts an additional "Plan Location" line (as shown below) if applicable (\#3)
"Exclude from PA": Excludes ineligible "Plan Locations" from eligible Diesel/Asphalt Price Adjustment items (\#4)
*"Copy Locations from Item": Refer to the "Plan Tab Manual Entry" Item List section


Lump Sum Items:
Select Item and the "Plan Item/Location" window will open
"Operation Code": select from the dropdown menu (\#1)
"NG" (Not Given) fields are not acceptable anywhere and need edited
"Unit Price": Will be locked at "\$1.00" if the "Unit of Measure" is "LS", "PDSUM", or "PDA" (\#2)
"Eligible for MPT IDR?"/"Certs Required": Select if applicable (\#3)
"Unbalanced Quantity": Must be balanced to zero to close contract (\#4)
Typically, all imported Lump Sum, PDSUM, and PDA items WILL BE unbalanced. If this number is not zero, review each individual plan location and its' quantities, and edit as required. It may be necessary to add new location(s) with value(s) to correctly balance. Locations added will be as per the specified breakdowns.

"Re-order"/"Re-number": (\#1)
"Reorder" will sort the Plan Locations based upon a predefined order of field headings
This will occur automatically after seleting "Ok" or "Save"

## Editing or adding Locations could potentially change your sort order

"Renumber" will assign numbers sequentially starting with "001"
Should be completed after all editing and reordering
"Add": Inserts an additional "Plan Location" line if applicable (\#2)
"Unbalanced Quantity": The total value of the "Plan Locations" is now balanced (\#3)
"Exclude from PA": Excludes ineligible "Plan Locations" from eligible Diesel/Asphalt Price Adjustment items (\#4)
"Dir"/"Side": Use dropdown menu to select data as needed (\#5)
If data is in the "Side" field, a "Dir." is required ("NG" is not permissable)

"Description": Briefly describes the payments (\#1)
"BreakQty"/"BreakUnit"/"BreakPrice"/"BreakAmount": (\#2)
"BreakQty": Is as specified, or as per the approved LS breakdown
"BreakUnit": Will always match the selected "Unit of Measure"
"BreakPrice": Will always be "\$1.00" if the "Break Unit" is "LS", "PDSUM", or "PDA"
"BreakAmount": Will be automatically calculated by CDS from multipling the "BreakQty" by the "BreakPrice"
"Copy Locations from Item": Refer to the "Plan Tab Manual Entry" Item List section (*)
The arrows can be used to scroll from one item to the next, either forward or backwards, in the listing (*)


Select "Ok" to save \& close

Once all items are complete, refer to the "Contract Setup Close" section

## Plan Tab Manual Entry:

If plan tabs are not available for import and need to be manually entered, select the "Item List" module (\#1) to open the "Item List" window

This screen will initially be blank, items will be displayed as entered

Select "Add PTC Item" on the "Item List" window (\#2)
Select "Add Non-Standard" on the "PTC Item Catalog" window (\#3)


Fill in all of the applicable Item information
Once completed, the "Save" button becomes activated for selection (\#1)
Saving the "Plan Item/Location" activates the "Add" button for "Plan Locations"
Select "Add" (\#2) to enter "Plan Location" details


To add the same Item Number with a different Fund Code

## Enter all applicable "Plan Location" information

Additional "Plan Locations" can be added as required


Select "Ok" to save \& close

After entering additional Items, "Plan Locations" can be copied from previously completed Items
Select "Copy Locations from Item" (\#1)
Select the Item containing the Plan Location(s) to be copied from the "Select Item" window (\#2)


All "Plan Location" information will be copied
The "PlanQty." may need to be modified as well as any other Plan Location information (may include adding/deleting locations)


The "Unbalanced Quantity" must be balanced to zero to close contract
If this number is not zero, review each individual plan location and its quantities, and edit as required. It may be necessary to add new location(s) with value(s) to correctly balance.

Select "Ok" to save \& close

Adding a duplicate Item Number with a different Fund Code:
Select "Add PTC Item" from the "Item List" window (\#1)
Select an applicable Item from the "PTC Item Catalog" window (\#2)
Select "Ok" (\#3)


Select the appropriate Fund Code (\#1)
Fill in all necessary information (\#2)


Additional Fund Codes may be added in the "Contract Funding Sources"
table

Complete remaining Item/Plan Location information in accordance with instructions within this section
"Re-Number":
Non Standard Items are added to the "PTC Item Catalog" and can be re-numbered
a. To Re-number a previously added item:

Select the Item you wish to Re-Number (\#1)
Select "Re-Number" (\#2)
Select "Add PTC Item to Catalog" from the "Item Re-Number" window (\#3)
Populate the Item information on the "New PTC Catalog Item" window (\#4)


Select "Ok" to save \& close

## Select the Item from the PTC Item Catalog



## Select "Ok" to save \& close

Item will be Re-Numbered in the "Item List"

b. To change a Fund Code on a previously added Item:

Select the Item from the "Item List" (\#1)
Select "Re-Number" (\#2)
Select the appropriate code from the "Funding Code" drop down menu (\#3)


Select "Ok" to save \& close
Refer to the "Contract Setup Close" section

## New Contract - Under an Existing Project:

If applicable, select "New Contract" (\#1) and "Add New Contract to Project" will open
Select an appropriate Project (\#2) to create the new contract under
Select "Ok" to open the "Contract - Contract" window


Enter the required information and proceed as instructed in the "New Project / Contract" section


Open End Contract Setup:
Unlike Standard Contract Types, Open Ends Contracts are not design specific (they do not have drawings).

The contract contains items that may be required, but do not have specific plan quantities. They are advertised with approximate quantity ranges and the sum of the proposed item values are used to obtain low bid and do not represent the contract value like standard contracts.

The contract value is predetermined by the Commission prior to bid.

Since each advertised item quantity is approximate, the items are not entered into CDS individually like the standard contracts.

Open End Contracts are setup using a single PDA Item with all of the advertised contract Bid Items entered into CDS as plan locations.

A CDS Output Plan Tab template can be modifed (with the bid tab information) to import the items into CDS or can be entered manually.

Enter all applicable Project, Contract, CMCI , Contractor \& Dates information as described in the section titled "Project Setup" for a Standard Contract, except for the "Contract Type" on the "Contract" window shown below
"Open End Contract" must be selected (\#1)

The Commission designated PDA is entered as the "BID Amount(\$)" (\#2)
(currently hidden by the Contract Type drop down)


Item List:
One PDA Item is added through the "Item List" Module or can be imported if available (\#1)
The Commission designated "Not To Exceed" PDA value is entered as the Item "Plan Quantity"

All advertised bid items are entered as Plan Locations (\#2)
Plan Location "ID Fields" should be numbered sequentially to represent each bid item (BID001, BID002, etc.)
"Description", "Item No.", "MP's", "BreakQty." (Bid Qty), "BreakUnit" and "BreakPrice" (Bid Price) are entered for each of the "Plan Locations"

The "BreakAmount" is calculated by multiplying the "BreakQty" and the "BreakPrice"

The "BreakPrice" will always be "\$1.00" if the "Break Unit" is "LS", "PDSUM", or "PDA"

Plan Location "Break Amounts" will be replaced with "0" after verifying the total against the Contractor's bid amount

A Line is added to balance the Item, Locations and Contract PDA (\#3)
"ID Field" entered to represent the total PDA amount (ex: BIDTOTAL)

Commission designated PDA entered in the "BreakAmount" field.


Select "Ok" to save \& close

## Contract Setup Close:

Contract Setup can be checked for errors and/or locked down to proceed to other CDS modules Close all other child screen / windows

Select "Project" (\#1)
Select "Setup" (\#2)
Select "Close Contract" (\#3)


Leave "Test Mode" box checked to analyze Contract Setup for required validations and errors (\#1)
Required validations and errors will be displayed in "Task List" window

Select "Perform Setup Close" (\#2)
Uncheck "Test Mode" \& "Perform Setup Close" to Lock Setup


Select "Close" to proceed to other CDS modules

Contract Maint (Post Setup Close):
Under the "CDSME Menu" select the "Contract Maint" module (\#1)


Items:
Select the "Items" module (\#1)
Select an Item (\#2)

"Plan Item/Location" window will open
"Eligible for MPT IDR?" (\#1) and "Certs Required?" (\#2) boxes are available for selection / deselection if necessary


Select "Ok" to save \& close

## Contractors:

## Select the "Contractors" module (\#1)

Select "Add" (\#2)
"Contractor Add/Update" window will open
Fill in all necessary information (\#3)


Select "Ok" to save \& close

## Dates:

Select the "Dates" module (\#1)
Input dates as the Contract progresses (\#2)


Select "Ok" to save \& close

IDR:
Under the "CDSME Menu" (\#1) (hover on the left hand side to show)
Select the "IDR" Module (\#2)


Prior to creating the first day (Notice to Proceed Day), at least one IDR Personnel must be added to the contract

## Adding Inspectors:

Select the "Inspectors" module


On "Contract Users" screen, select "Add" to choose from "Available Inspector" list If the individual is not listed, they need to be added to the "Available Inspector" list


Select "Add" (\#1)

## "Application User Add/Update" window will open

Fill in necessary information (\#2) and select the appropriate role
"Enable User Account" "Yes" enables the user to log on to this database, selecting "No" will disable the user's ability to log on to this database

## Select "Ok" to Save \& Exit



User will now appear on the "Available Inspector" list
Select to highlight necessary personnel from the list
Assign "Office Letter"
Begin with Office Letter "A" as the first Office Letter, then assign sequentially
Typically, Office Letter " $A$ " is assigned to the Construction Manager/Resident Engineer

Office Letter " $B$ " is assigned to the CDS Operator followed by personnel as they are assigned to the contract

Select "Consultant" and/or "Direct Entry Box" if applicable"


Choose "Select" to add personnel to the "Contract Users" list
Repeat as necessary for all personnel

If modification of personnel is necessary, select to open the "Inspector Status Active/Inactive" screen (\#1)

Select/unselect "Active?" to unassign or reassign personnel to this contract (\#2)
Assigning or reassigning personnel to a contract will include the individual on any open Master Diary days

Start/Stop Date will be automatically populated by CDS
"Consultant?" and "Direct Entry Default" can be modified as needed (\#3)


## IDR Generation:

In the "CDSme Menu", select "IDR" module (\#1)
Select the "IDR" module from the top row (\#2)

"Daily Inspector List" screen will open and IDR(s) can now be entered

Create Day

## Select "Create Day" (\#1)

## Automatically creates next day

Select "OK" (\#2) to create the new day

It will automatically pull the notice to proceed day for the first day (Confirm that this matches contract documents)

Contact your CDS Coordinator if your first day of entry is NOT the notice to proceed day

Only allowed 3 open days at a time (may create 1 calendar date beyond the current date)

A Master Diary Skip may be performed after the Notice to Proceed day is closed for a large period of inactivity (See the Navigation Guide for more details)


Enter Weather
Enter weather info on the top of the screen
(*) Notice new day (verify this is the correct day for info you are entering)


After entering weather information the "Save" button becomes active for selection
Select "Save"

The weather will be lost if not saved!


## Entering Contractors:

Where the daily labor/equipment and hours of work for each contractor on site for the day are entered

Select the "0" box for the appropriate person in the "Contractors?" column (\#1)
A "Contractor Inspector List" window will open (\#2)


## Select "Select Contractor" (\#1)

"Contractor Add/Update inspector Day" window will open (\#2)
Select Contractor Name (\#3)


If contractor is not available for selection, you must add it via the
"Contractor Maintenance" button as follows:

Select "Cancel" to close screen (\#1)
Select "Contractor Maintenance" (\#2)


## "Contractors" window will open

Select "Add"


## "Contractor Add/Update" window will open

## Fill in available information

Note: Completion of the "DBE/MBE/WBE Information" fields is only necessary for minority subcontractors

Be sure to complete "DBE/MBE/WBE information" fields below for all DBE/DB contractor types

Select "OK"

| * Contractor Add/Update |  |  | x |
| :---: | :---: | :---: | :---: |
| BPID:\|p00822 | Contractor Type: SUPPLIER | Status: W/BE | $\bullet$ |
| Name: Callahan Paving Products | Certification \#: 10452 |  |  |
| Address 1: Caradean Drive |  |  |  |
| Address 2:] |  |  |  |
| City: Horsham | State: PA | Postal Code: 19044 |  |
| Federal ID \#: | Phone \#\#: $(215) 443-5040$ |  |  |
|  | Phone2 \#: , __-_ |  |  |
| Contact |  |  |  |
| Project Manager: | Phone \#: C______ $^{\text {_ }}$ |  |  |
|  |  |  |  |
| Superintendent: | Phone\#: (__)___ |  |  |
|  | Phone2 $\#:$ (__)__-_ |  |  |
| DBE/MBEWBE Information |  |  |  |
| Subcontract Date: Monday. October 06, 2014 | Subcontract Approval Date: Friday, October 10, 2014 |  |  |
| Committed Amount: $\$$ \$ 20.812.74 | Contracted Amount: | 8.271.05 |  |
|  | $\cdots$ | OK Cancel | Seve |

Selecting "Close" returns to the Actual Location entry and the Contractor is now available for selection in the drop down menu


Enter Contractor working hours

CDSme Field Office - Project: T-220.00T001 | Contract: T-220.00T001-3-04 - [Contractor Inspector List - Day 03/03/2016]


管 CDSme Field Office - Project: T-220.00T001 | Contract: T-220.00T001-3-04 [Contractor Add/Update In... X

Contractor Name: NEW ENTERPRISE STONE \& LIMECD. INC
Start Time: $08: 00 \mathrm{AM} \div \quad \Gamma$ No Work
End Time: 03/03/2016 04:00 PM $\div$

OK
 Save Contractor Maintenance...

Select "OK" to close and save
Select the box in the "Labor/Equipment" column to add labor and equipment


## "Contractor Labor \& Equipment" window will open

Select "Add" next to Labor (\#1)
Select type and enter quantity

Select "Add" next to Equipment (\#2)

Select type and enter quantity
Select "Ok" to save \& close when finished

Note: (*) The inspector's previous Labor \& Equipment can be copied and modified as necessary


If IDR Labor and/or Equipment types are not found in the drop down menu, they must be added as follows:

To add new labor type(s), select "Labor Maintenance" (\#1)
To add new Equipment type(s), select "Equipment Maintenance" (\#2)

"Labor Types" screen will appear with a list of already entered types
Select "Add" to create a new type (\#1)
Enter Code \& Description (\#2)

Note: Try to create new codes similar to existing code format to logically group/sort new labor types


Select "OK" to save and close

Notice new type will appear in the list


Select "Close" in the bottom right hand corner to return to the Contractor Labor \& Equipment window

## Repeat process for Equipment if necessary

Note: Try to create new codes similar to existing code format to logically group/sort new equipment types


Once finished, select "OK" to save and close


## Notice Labor/Equipment box is updated



## Select "Close"

Notice updated number in "Contractors?" column


This process is repeated for each documented Contractor

## Adding an IDR:

Used to enter the inspector's daily report

Personnel can have any combination of General IDR's and Project Activity IDR's created in the same calendar day (Ex: 2 General IDR's for 2 separate Contractors)

Select the " 0 " box for the appropriate person in the "IDR's?" column to add a new IDR (\#1)
"IDR List" window will open, select IDR type (\#2)


## Adding Project Activity:

Should NOT be used to document physical work activities by the contractor

Generally filled out by PM or CM, however, may be utilized by inspector that is not working on an item specific task (Ref Com)

## Enter all information in rectangle

May need to change the date if the inspector is working night shift

Note: For inspector hours and work assignments/hours, all information is transferred to previous/additional IDR's created for this date


Project Activity Overview $\rightarrow$ Record inspector's remarks verbatim; after properly correcting composition, grammar, and spelling errors (\#1)

Add attachments if applicable (\#2)

## See "Attachments" Section for more details

Add references/remarks if needed (\#3)
When all information has been entered the IDR can be closed (Bottom left corner) (\#4)

## Selecting "Cancel" will delete and not save any entered information



Select "OK" to save and exit

## Adding General:

This IDR is required to document contract pay items, work history, and related info for existing contract items and/or control numbers

## Add inspector hours (\#1)

Note: May need to change the date if the inspector is working night shift

## Add work assignments \& hours (\#2)

Note: For inspector hours and work assignments/hours, all information is transferred to previous/additional IDR's created for this date

Add items $\rightarrow$ use "Select" button to choose the item of work (\#3) "IDR Plan Item Select" window will open


## "Allow Row Filtering":

## Available for "Unit Price" \& "Lump Sum" Item/Plan Location filtering if desired

Select "Allow Row Filtering?" Box (\#1)
Various fields are enabled at both the Item \& Plan Location level (\#2)

Start typing values into the applicable field and the list will be filtered


The example above is at the Item level, may also be used at the Plan Location level

Unit Price:
Select "Unit Price" tab
Note: There are 2 separate tabs for "Unit Price" \& "Lump Sum" items

## Scroll to find the Item number

Select the " + " to the left of the Item to expand item locations (\#1)

Select the gray box in the "Act. Loc." column for the appropriate ID location to enter the applicable actual item/location payments and/or work history (\#2)

```
CDSme Field Office - Project: T-220.00T001 | Contract: T-220.00T001-3-04 - IDR Plan Item Select]
```



Select "Contractor" from drop down list
If applicable Contractor is not available for selection, use "Add/Manage Contractors" button (*) refer to "Entering Contractors" section for details

Enter "Stage", actual work stations "From" \& "To" (if applicable), "Direction" \& "Side"
If plan location is complete, indicate by checking "Comp?" box
This changes the location (ID Field) row to gray inside various reports versus a white background. Payments or remarks for work history can still be made to locations in a "Complete" status

Enter "Field Qty." if payment is required
Remarks are mandatory for a work history (payment of " 0.00 ")

Enter "Remarks" (If this is not a Direct Entry, record inspector's remarks verbatim; after properly correcting composition, grammar, and spelling errors)


Note: checkmark in the item number box and pencil icon

The checkmark indicates which items have been worked on
The pencil appears when a location within that item has been opened to work on, but has not yet been saved

## "Add New Plan Location" button available for use if needed



Refer to "Change Authorization" section

Available functionalities for use if needed:
"Payment History":

"Item Payment History" window opens to view all previous payments \& work history at this location

| $x$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Date | $\begin{aligned} & \text { Off. } \\ & \text { Let. } \end{aligned}$ | Rout | Ramp | ID | Stage | Station From | Station To | Dir. | Side | Description | Actual Location Remarks | Contractor | Field Qty. | Work History |
| - 0605020120 | C | 1-76 |  | 001 | 1 C | $374+15$ | 376+50 | WB | LT | AS DIRECTED - UN | CONTRPLACED ${ }^{\text {G }}$ | NEW ENTERP | 496.11 | $\square$ |
| 05/01/2015 | M | 1-76 |  | 001 | 1 C | 375+40 | 381+46 | EB | RT | AS DIRECTED - UN | CONTR PLACED G | NEW ENTERP | 889.56 | T |
| 06/08/2015 | C | 1-76 |  | 001 | 1 C | $376+50$ | 379+62 | WB | LT | AS DIRECTED - UN | CONTR PLACED G | NEW ENTERP | 658.67 | $\Gamma$ |
| 06/12/2015 | C | 1-76 |  | 001 | 1 C | $382+00$ | $383+50$ | WB | LT | AS DIRECTED - UN | CONTR PLACED G | NEW ENTERP | 316.67 | $\Gamma$ |
| 04/29/2015 | M | $1-76$ |  | 001 | 1 C | 382+45 |  | EB | RT | AS DIRECTED - UN | CONTR PLACED G | NEW ENTERP | 40.00 | $\Gamma$ |
| 04/29/2015 | M | $1-76$ |  | 001 | 1 C | 382+92 |  | EB | RT | AS DIRECTED - UN | CONTR PLACED G | NEW ENTERP | 40.00 | $\Gamma$ |
| 06/16/2015 | C | $1-76$ |  | 001 | 1 C | 385+50 | 386+50 | WB | LT | AS DIRECTED - UN | CONTR PLACED G | NEW ENTERP | 211.11 | $\Gamma$ |
| 04/28/2015 | M | $1-76$ |  | 001 | 1 C | $385+77$ | 388+65 | EB | RT | AS DIRECTED - UN | CONTR PLACED G | NEW ENTERP | 832.00 | $\Gamma$ |
| 06/23/2015 | C | $1-76$ |  | 001 | 1 C | $388+76$ | $389+00$ | WB | LT | AS DIRECTED - UN | CONTR PLACED G | NEW ENTERP | 50.67 | $\Gamma$ |
| 05/14/2015 | C | 1-76 |  | 001 | 1 C | 389+14 | 393+00 | WB | LT | AS DIRECTED - UN | CONTR PLACED G | NEW ENTERP | 1.243.78 | $\Gamma$ |
| 06/23/2015 | C | 1-76 |  | 001 | 1 C | $389+19$ | 389+74 | WB | LT | AS DIRECTED - UN | CONTR PLACED G | NEW ENTERP | 0.00 | V |
| 04/29/2015 | M | $1-76$ |  | 001 | 1 C | $391+00$ | 392+25 | EB | RT | AS DIRECTED - UN | CONTR PLACED G | NEW ENTERP | 208.33 | $\Gamma$ |
| 04/23/2015 | J | $1-76$ |  | 001 | 1 C | 393+00 | 393+40 | EB | RT | AS DIRECTED - UN | CONTR PLACED G | NEW ENTERP | 26.67 | $\Gamma$ |
| 05/14/2015 | C | $1-76$ |  | 001 | 1 C | 393+00 | $400+00$ | WB | LT | AS DIRECTED - UN | CONTR PLACED G | NEW ENTERP | 2,177.78 | $\Gamma$ |
| 04/23/2015 | J | $1-76$ |  | 001 | 1 C | $393+40$ | $394+50$ | EB | RT | AS DIRECTED - UN | CONTR PLACED G | NEW ENTERP | 415.56 | $\Gamma$ |
| numoinnit. | 1 | 1.76 |  | n11 | Ir | $201+5 n$ | $20 \mathrm{c}+2 \mathrm{n}$ | $F R$ | RT | AECIRESTES_IIM | camtrdiarenfa | MEINI ENTERD | cenm | $\Gamma \rightarrow$ |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  | Close |

## "MPT IDR":

Do not enter remarks in the actual location line (The remarks will be prepopulated by the information entered under the MPT IDR button)


If the button is grayed out, you need to activate by performing the following:
Select "Ok" to save \& close out of the "IDR Plan Item Select" window and "General IDR" window
Select "Close" to exit the IDR Selection window
Under the "CDSME Menu" select the "Contract Maint" module (\#1)
Select "Items" module (\#2)


Select the appropriate MPT item


## "Plan Item/Location" window will open

Select "Eligible for MPT IDR?" check box

Only needs to be performed once for the duration of the project


Select "Ok"

## Return to IDR entry

## Button will now be activated (turns orange)

## Select "MPT IDR" button



## "MPTIDR" window will open

Enter all available information in red rectangle


## Select "Preview" (\#1)

The auto-generated remarks for the specific pattern information will display (\#2)


Record inspector's remarks verbatim; after properly correcting composition, grammar, and spelling errors in the "Actual Location Remarks" field


Select "OK' to return to "IDR Plan Item Select" screen

## Remarks will now be visible in the actual location line

Note: Background of MPT IDR button turns yellow after information is entered


If needed, remarks have to be edited within the MPT IDR button

## Placement date:

Used to record the correct date the work was actually performed if date differs from the Master Diary date you are currently working on

Primarily for asphalt and diesel fuel payments

See Adjustments Section for more details


## Calculator:

Used to verify calculated quantities and capture supporting calculations/ inspector's math (inserts calculation remarks \& populates the "Field Qty." with the calculated result)

This will overwrite any previous payment entry with the calculated result

Any re-entry of a "Field Qty." will remove calculated remarks


## Material Receipt:

Used to track invoice and certification quantity of materials received on project
Refer to the "Material Receipt" section for more details


## "Add" (Add New Actual Location):

Used to add additional entries for the actual location from the same IDR if needed:

## Select "Add" button to make additional entries to the same plan location (\#1)

Additional entry line will appear (\#2)

" $X$ " button available to delete actual location entry if needed


Select "OK" to close "Plan Item Select" screen and return to the General IDR
Notice only 1 Actual Location is listed on the IDR because the second actual record under this plan location was successfully deleted


If you saved the Actual Location, you must delete it from the "General IDRDay" screen

Delete the saved Actual Location from the IDR screen:
Expand the item and Actual Location line to find Location you wish to delete

## Select the " X " button (\#1)

"Do you wish to delete this Actual Location from the IDR?" prompt, select Yes (\#2)


If this location is the only entry, the entire item needs to be removed from the IDR:
On the IDR screen select the " $X$ " next to "Plan Loc." to delete the item


Note: If you expand the item number and delete through the actual location row, it will still appear on the IDR


Item is still listed on the IDR with a " 0 " in the Plan Location column


You must then delete the item from the IDR screen for it to be completely off of the IDR


If there is only 1 Actual Location selected for any ID field and it is deleted from inside the "Plan Item Select" screen before saving, it will still show on the IDR with a " 0 " in the Plan Location column and the item must be deleted from the IDR

## Select the " $X$ " next to the "Add" button



Window will open asking if you "wish to delete this unsaved Actual Location from the IDR?"

## Select "Yes" to delete



Notice the "Actual Location" was deleted and the gray box returns to a " 0 ", however, there is a checkmark in the box next to the "Item No." column indicating this item was worked on


To remove the item from the IDR completely, select the box on the far right next to the " $\mathrm{O} / \mathrm{U}$ Qty." column to remove checkmark

Once the box is unchecked (\#1), notice that the checkmark in the box next to the "Item No." column has been removed (\#2), no longer indicating that this item has been worked on

This will fully remove the item from the IDR


## If you do not uncheck the box next to the " $Q / U Q t y . "$ column, it will remain

 on the IDRReturn to IDR screen, and you will see the Item is listed on the IDR even though there are no
Actual Locations entered


Delete Item from the IDR to be fully removed


## "Add new plan location"

## Used to add a plan location (I.D. Field) when there is no existing location within the contract item

To do this: select "Add New Plan Location Icon"
Refer to the "Change Authorization" section for more details


Lump Sum:
Lump Sum items are structured to properly pay component item quantities at various units of measure

Select "Lump Sum" tab (\#1)

## Scroll to find the item number

Select the " + " to the left of the item (\#2)

Select appropriate ID field location by selecting the gray box in the "Act. Loc." column (\#3)


All information for the LS actual location record is entered similar to the unit price item entry with the exception of the pay quantity

Select＂Contractor＂from drop down list

> If applicable Contractor is not available for selection，use＂Add／Manage Contractors＂button refer to＂Entering Contractors＂section for details

Enter＂Stage＂，actual work stations＂From＂\＆＂To＂（if applicable），＂Direction＂\＆＂Side＂

If plan location is complete，indicate by checking＂Comp？＂box，enter＂Break Qty．＂if payment is required

The Break Amount will be auto－populated from the Break Qty．multiplied by the Break Price

Remarks are mandatory for a work history（payment of＂ 0.00 ＂）

Enter＂Remarks＂（If this is not a Direct Entry，record inspector＇s remarks verbatim；after properly correcting composition，grammar，and spelling errors）

| ［3 CDSme Field Office－Project：T－220．00T001｜Contract：T－220．00T001－3－04－［IDR Plan Item Select］ X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Allow Row Filtering？「 <br> Unit Price Lump Sum｜ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Lump Sum Items |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Item No． |  | Fund | UoM | Item Description |  |  |  |  |  |  |  |  |  | Unit Price | Plan Qty． |  | $\begin{aligned} & \text { CO/CA } \\ & \text { Qty. } \end{aligned}$ | Current |  | Actual Qty． | $\begin{aligned} & \mathrm{O} / \mathrm{U} \\ & \mathrm{Qty} . \end{aligned}$ | $\square$ |
|  |  | 0608－0001 | 10 |  | LS M | MOBILIZATION |  |  |  |  |  |  |  |  |  | \＄1．00 | 6．213．500．0 |  | 0.00 | 6．213．500．0 |  |  | －10，000．00 | 㿽 |
|  |  | 0686－0010 |  | 10 | LS C | CONSTRUCTION SURVEYING，TYPE A |  |  |  |  |  |  |  |  |  | \＄1．00 | 150，000．00 |  | 0.00 | 150，000．00 |  | $6,203,500.0$ $75,000.00$ | －75，000．00 | 움 |
|  |  | 0686－0050 |  | 10 | LS C | CONSTRUCTION SURVEYING，TYPE D |  |  |  |  |  |  |  |  |  | \＄1．00 | 75，000．00 |  | 0.00 | 75，000．00 |  | 37，500．00 | －37．500．00 | 路 |
|  |  | 0910－7210 |  | 10 | LS T | TESTING OF ENTIRE LIGHTING SYSTEM |  |  |  |  |  |  |  |  |  | \＄1．00 | 2，557．34 |  | 0.00 | 2．557．34 |  | 0.00 | －2，557，34 | 웅 |
|  |  | 2000－0001 |  | 10 | PDA P | PRICE ADJUSTMENT FOR DIESEL FUEL COST FLUCTUATIO |  |  |  |  |  |  |  |  |  | \＄1．00 | 100，000．00 |  | 0.00 | 100，000．00 |  | 0.00 | －100，000．00 | 喧 |
|  |  | 2018－0001 |  | 10 | LS | REMOVAL OF BRIDGE，B－354，MP 221.30 |  |  |  |  |  |  |  |  |  | \＄1．00 | 104，442．47 |  | 0.00 | 104．442．47 |  | 70，000．00 | －34．442．47 ${ }_{\text {号管 }}$ |  |
|  |  | $\begin{array}{l\|l} \text { Act. } & 1 \\ \hline \text { Loc. } & \text { Fi } \end{array}$ |  | Desc． |  | $\begin{aligned} & \mathrm{St} \\ & \mathrm{~g} . \\ & \hline \end{aligned}$ | Rte． | Rmp | $\begin{aligned} & \text { Sta. } \\ & \text { Fr. } \end{aligned}$ | $\begin{aligned} & \text { Sta, } \\ & \text { To } \end{aligned}$ | Dir | Side | $\begin{gathered} c_{0} \\ \mathrm{mp} ? \end{gathered}$ | Plan Break Qty． | Plan Break Amt． | colca Break Qty． | CO／CA Break Ant． | Current Break Qty． | Current Break Ant． | Actual Break Qty． | Actual Break Ant． | OU <br> Break Qty． | OU <br> Break <br> Ant． |  |
|  |  | $1 \quad 00$ | 001 | PHASE 1 EB D．．． |  | －－ 1 | $1-76$ |  |  |  |  | RT | F | 35.000 | 35，000． | 0.00 | 0.00 | 35，000． | 35，000． | 35,000 |  | 0.00 | 0.00 V 圆。 |  |
|  |  | Contr | tractor |  | Stoge | Break Qty． |  | Break Unit | Break Price |  | Break Amt． |  | Sta．F | r．Sta． | －Dir． | Side | Comp Remarks <br> $? \boldsymbol{V}$ Example Text |  |  | Calcs |  |  |  |  |
|  |  | NEW ENTERPRIS． |  |  | 1 C | 0.00 |  | LS | \＄1．00 |  | \＄0．00 |  |  |  | EB | RT |  |  |  |  |  | 迤國 或 Add X |  |  |
|  |  | Act. | $\begin{aligned} & \text { ID } \\ & \text { Field } \end{aligned}$ | Desc． |  | $\begin{aligned} & \mathrm{st} \\ & \mathrm{~g} \end{aligned}$ | Rte． | Rmp | $\begin{aligned} & \text { Sta, } \\ & \text { Fr. } \end{aligned}$ | $\begin{aligned} & \text { Sta. } \\ & \text { To. } \end{aligned}$ | Dir． | Side | $\begin{gathered} C_{0} \\ \mathrm{mp} ? \end{gathered}$ | Plan Break Qty： | Plan Break Amt． | COICA Break Qty． | CO／CA Break Ant． | $\begin{aligned} & \text { Current } \\ & \text { Break } \\ & \text { Qty. } \\ & \hline \end{aligned}$ | Current Break Amt． | Actual Break Qty： | Actual Break Amt． | OU <br> Break Qty | OU <br> Break Ant． |  |
|  |  | 0 002 | 002 | PHASE 1 WB D． |  | D．． 1 | $1-76$ |  |  |  | WB | LT | V | 35.000 | 35，000． | 0.00 | 0.00 | 35，000． | 35，000． | 35，000． | 35，000． | 0． 0.00 | 0.00 Г |  |
|  |  | 0 003 | 003 | PHAS | E 2 DEM | － 2 | $1-76$ |  |  |  | EB／ | RT／ | $\Gamma$ | 34，442． | 34，442． | 0.00 | 0.00 | 34，442． | 34，442． | 0.00 | 0.00 | 道 | －34，442．$\Gamma$ |  |
|  |  | Item No． |  | Fund | UoM | Item Description |  |  |  |  |  |  |  |  |  | Unit Price | $\begin{aligned} & \text { Plan } \\ & \text { Qty. } \end{aligned}$ |  | CO／CA Qty． | Current Qty． |  | Actual Qty． | $\begin{aligned} & 0 / U \\ & \text { Qty. } \end{aligned}$ |  |
| $\pm$ | $\Gamma$ | 2018－0002 | 10 |  | LS R | REMOVAL OF BRIDGE，B－534，MP 223.47 |  |  |  |  |  |  |  |  |  | \＄1．00 |  | 125.20 | 0.00 |  | 25．20 | 60，000．00 | －30．125．20 | 呺 |
| ＋ | $\Gamma$ | 2018－0003 | 10 |  | LS R | REMOVAL OF BRIDGE，B－533，MP 224.51 |  |  |  |  |  |  |  |  |  | 51.00 | 140 | 463.50 | 0.00 | 140，4 | 63．50 | 95，463．50 | －45，000．00 | 囐 |
| ＋ | $\Gamma$ | 2018－0004 | 10 |  | LS R | REMOVAL OF BRIDGE，B－535．MP 224.61 |  |  |  |  |  |  |  |  |  | \＄1．00 |  | ，997．94 | 0.00 | 116.9 | 7．94 | 81，997．94 | －35．000．00 | 枵 |
| ＋ |  | 2018－0005 | 10 |  | LS R | REMOVAL OF BRIDGE，B－575，MP 225.90 |  |  |  |  |  |  |  |  |  | \＄1．00 |  | 956．88 | 0.00 |  | 56.88 | 31.500 .00 | －63，456．88 | 碞 |
|  | $\Gamma$ | 2018－0006 |  | 10 | $\begin{array}{\|l\|l\|} \hline \text { LS } & \text { F } \\ \hline \text { LS } & \\ \hline \end{array}$ | REMOVAL OF BRIDGE，B－537，MP 226.92 |  |  |  |  |  |  |  |  |  | \＄1．00 |  | 010．43 | 0.00 | 150，0 | 0．43 1 | 100，000．00 | －50，010．43 | 咀 |
| ＋ |  | 2018－0009 | 10 |  |  | REMOVAL OF BRIDGE，B－574，MP 222.90 |  |  |  |  |  |  |  |  |  | \＄1．00 |  | ． 057.23 | 0.00 | 28，057．23 |  | 0．00 -28.057 .23 碞－ |  |  |
|  |  |  |  |  |  | Add／Manage Contractors |  |  |  |  |  |  | Add Control \＃．．． |  |  |  |  |  |  |  |  | OK | Canc |  |

Recording a Plan Location in a Lump Sum Item in Overrun:

In the example below, "Actual Break Qty." has exceeded "Current Break Qty."

Warning will appear, select "Ok" to continue


The intent is to capture the actual quantity overrun but not pay the monetary value of the overrun

We want to adjust the "Break Amt." to not exceed the "Current Break Amt."
In the example below, 2.00 CY is the total overrun, the "Break Amt." was adjusted by entering "0.00"


If in the example above only 4 CY of the 5 CY "Current Break Qty." have been placed and 2 CY are paid, only 1 CY for this location will be in overrun. Therefore, the "Break Amt." would be adjusted to 937.00 which represents the remainder of the "Current Break Amt." to be paid.

Recording a Plan Location in a Lump Sum Item in Underrun:

The example below shows an underrun "Break Amt." for this completed location. To accurately record the "Actual Break Qty." a "0.00" quantity will be entered, however, 19,302.20 will have to be entered for the "Break Amt." to adjust the "Actual Break Amt." to meet the "Current Break Amt." for this location. This pays the plan location to $100 \%$ complete without paying quantity. If an additional quantity needs to be entered, "Break Amt." would continue to be entered as " 0.00 ".


## Attachments:

At anytime when shown within the CDS application, select "Add Attachment..." to indicate an additional doccument was provided (\#1)

The "Add Attachment" window will open to select the "Hardcopy File Folder" and provide "Description" (\#2)


Select "Ok" to save \& close

## Closing the IDR: (v2.1.07)

Once all item payments \& work history's are complete and required information is completed for hours and work assignments, the IDR needs to be closed in order for the closing of the Master Diary validation to be met.

However, for direct entry, the Inspector will indicate "Ready for Review". The "Closed" status will not be available for selection at the Inspector role. Managers and/or CDS Operators will change the status to "Closed" once the IDR entry is reviewed. If an Inspector needs to make edits to their "Closed" IDR, the Manager and/or CDS Operator has to change the status to "Open". This also pertains to the "Project Activity" IDR.
"Add Attachment": Available for use if needed, see Attachments section for more details (*)


Select "Ok" to close \& save

## Ready for Review: (v2.1.07)

The IDR Status correlates to the colors as indicated
"Ready for Review" column and colored indicators were added in v2.1.07, and are not always shown in screenshots throughout this entire manual

## IDR entry has not been generated (*)



Inspector "IDR List" screen will show the status of all entered IR's
"IDRs?" and "Closed" status columns will not be updated on the "Daily Inspector List" screen until the inspectors "IDR List" screen is closed


Note: You can select an existing IDR from the "IDR List" screen (either "Open" or "Closed" status) to edit
"114 Day": (\#1)
A "Work Assignment Code 114" is utilized for the weekend or other work when a staff member is absent and is not filing an IDR for the calendar date

By selecting this button, any staff member without an IDR entered will automatically receive this work assignment code and automatically close the IDR for each staff member

Please review drop down menu within an IDR for other Work
Assignment codes (Ex: vacation, holiday, etc.)
"Print Day": (\#2)
Renders a print preview where you will check the accuracy of your input (this should be done before the day is closed)
"Close Day": (\#3)
After all necessary information has been entered for the IDR's (attachments, calculations, contractor and weather information, etc.) the calendar day must be closed

> If applicable, enter Concrete and/or Bituminous IDR's before closing the day (Refer to "Adding a Bituminous IDR / Concrete IDR" sections for details)


Once "Close Day" is selected, you will be prompted to generate a daily report (Master Diary)
Select "Yes" to export the Master Diary for electronic signature and importing into the PCDS
Select "No" (*) if you immediately determine that editing is required and need to reopen the day

Note: The "Close Day" button has changed to "Open Day"

A day cannot be opened prior to an approved estimate or a day that is part of a Master Diary Skip


After selecting "Yes", "Report Viewer" will open and render the print preview
Select "Export" icon (\#1) and choose "PDF" format (\#2)


Select location where you wish to save the Master Diary
Refer to the PCDS Documentation Guide for naming convention
Apply the required digital signatures
Upload to the PCDS

IDR Review Notes:
Can be utilized in the "General IDR" for any closed day where an Item is documented to incorporate additional notes for correcting previous IDR entries

Select applicable Item ID Remarks to open the "Review Note(s)" window


## "Review Note(s)" window will open

Add notes as needed

Select "Ok" to close and save


Notice the button has changed to red to indicate Review Notes have been added
Select "Cancel" to close \& save


To remove a Review Note, open the Review Note field and delete all narrative
Select "Ok" and then select "Cancel" to save \& close
A Review Note can be edited at any time

A Review Note is not visible in the Master Diary print out, however, it is visible in the Reports module

## Adding a Bituminous IDR:

The Bituminous JMF must be entered before the Bituminous IDR, see "JMF's in Contract" under the "Materials Field Logs" section

After item is entered, if there is also a Bituminous IDR, select "Bituminous IDRs" at the bottom of the screen (Verify the appropriate item is selected prior to selecting the "Bituminous IDRs" button)


Note: "Bituminous IDRs" button is available to create or edit Bituminous IDR's even if the IDR or Master Diary date is closed (Ex: adding lab "Core Compaction" results)
"Bituminous IDR List" screen will open
Select "Add"


Select "Add" in "Shipment Details" row to enter shipment details (\#1)
Add "Limits of Paving" (\#2) Enter either "Stations" or "Milepost" as provided on the IDR
Check the "Shipment Units" (\#3) to ensure the appropriate unit

Enter all other necessary information including inspector's "References / Remarks" verbatim; after properly correcting composition, grammar, and spelling errors


## Select "Add" to generate the "Lots" detail window

3. CDSme Field Office - Project: T-220.00T001 | Contract: T-220.00T001-3-04 - [Bituminous IDR - Day 03/04/2016 - DAVE WARY


"Bituminous IDR Lot Detail" window will open


Select "Add" (\#1) and enter necessary information (\#2)


Select "OK" to save \& close the "Bituminous IDR Lot Detail" screen


Note: "Core Compaction" results may be reported as an average \& therefore, only 1 numerical value will be entered per "Sublot"

After all information is entered, select "Ok" to save \& exit the Bituminous IDR

## Concrete IDR:

## The Concrete JMF must be entered before the Concrete IDR, see "JMF's in Contract" under the "Materials Field Logs" section

After item is entered, if there is also a Concrete IDR, select "Concrete IDRs" at the bottom of the screen (Verify the appropriate item is selected prior to selecting the "Concrete IDRs" button)


Note: "Concrete IDRs" button is available to create or edit Concrete IDR's even if the IDR or Master Diary date is closed (Ex: adding cylinder break results)

## "Concrete IDR List" screen will open

Select "Add"


Fill in all necessary information and "References/Remarks" (\#1)
Once completed, "Save" button becomes activated for selection (\#2)
Saving the "Concrete IDR" activates the "Add" button for "Shipment Details"
Select "Add" to enter "Shipment Details" (\#3)


## Enter "Shipment Details"

## Select "Save" to allow entering of "Cylinder Series" (\#1)

Select "Add" under the "Cylinder Series" column to enter concrete cylinder data (\#2)


## "Concrete IDR Cylinder Details" window will open

Fill in all necessary information
Select "Save" to allow entering of cylinder details (\#1)
Select "Add" under the "Cylinder Breaks" column to enter concrete cylinder details (\#2)


## "Concrete IDR Cylinder Break Details" window will open

Fill in "Cylinder Break Information" (\#1)
Select "Save" to allow entering of "Cylinder Break Details" (\#2)
Enter "Cylinder Break Details" (\#3)


Select "Ok" to save \& close
Repeat this process for entering future test data

## Select "Tests \& Specimen Curing" tab

## Fill in all necessary information

## You can now select the "Testing Apparatus"



Select "Ok" to save \& close

## Notice "Cylinder Details" have been populated and are available for edit/update



Select "Ok" to save \& exit
Upon completion of the Acceptance Testing, the "Concrete Cylinder Worksheet" (458-A form) must be uploaded to the PCDS

Source of Supply: (v2.1.03)
Used to list and track all approved source of supply information for each item
This information will be exported to the "As-Built Title Sheet"

On the top row, select "Source of Supply" module (\#1)
Select "Add" (\#2)
Fill in the SOS information (\#3)
"Active" will be automatically selected but can be unselected if necessary to remove from reports (*)
Select "Ok" to save \& add to the "Source of Supply" list
"Material Receipt Count" displays the number of occurrences for that Material Source of Supply (*)


## Material Receipt: (v2.1.03)

Used for tracking invoice and certification quantity of materials received on project. It is also used to verify that the material shipped is from submitted and approved source of supply.

On the top row, select "Material Receipt" module
An item list will appear based off of items selected for "Certs Required?" at contract setup
Select an existing Item Number, or select the "Add" button to begin entry of information (*)

"Material Receipt" window will open
Select item number if "Add" was utilized (\#1)

## Automatically populates item number if an item was selected or entering from IDR payment screen

Submittal ID can be utilized for sorting/tracking purposes of non-incidental entries (\#2)
Individual naming conventions should be used in order for the sort function to track separately

Example: REBAR01, REBAR02, TACK001, TACK002, CLASSACONCO01


Select "Add SOS" (\#1)


## "Source of Supply" window will open

Select "Add" (\#2)
Fill in the SOS information (\#3)


Select "Ok" to save \& add to the "Source of Supply" list


Select "Ok" to return to the "Material Receipt" window
"Material Received" information will be auto populated
"Clear SOS" (*) will clear the populated fields and return to the SOS list for selection


Invoice Number (\#1)

Examples: NG (Not Given), 045936-045941, 7599924\&7599938, BL-0011853, T4395K, 27335-4, 276561 *3, PAP48310, W0252929

Invoice Quantity (\#2)

Enter 0.00 if you only have the CS-4171 or Catalog Cut

Certification Quantity (\#3) should reflect the quantity of material delivered/certified to the project site Unit Measure (\#4)

Attempt to keep the pay item's certification unit of measure consistent with the actual item's unit of measure (conversions may be needed to convert certification unit of measure to pay item's unit of measure)

If the unit of measure is not listed, refer to the Navigation Guide for instructions on how to navigate to the "Project/Contract Maint." Tab

Select "Trackable" to track the payable portion of the Item \& "Sampled" if the material was sampled (*)


File reference (\#1) refers to the PCDS folder structure
Remarks (\#2)
Examples: DELIVERY TICKETS, BATCHER MIXER SLIP, CS-4171
Ticket \#01234-\#01239 (6 Loads)
12 'x200' per roll/9 = 266.67 SYx4 rolls= 1,066.68 SY
Material was also used for item number XXXX-XXXX


Select "Ok" to save to the list \& close
Receipts can be edited or deleted by selecting the appropriate record

Invoice will be added to the Material Receipt list


## Calculator:

Basic construction calculator available for use as needed by selecting appropriate function
On the top row, select "Calculator" module
"Construction Calculator" window will open


## Deficiencies:

Used to report issues and track progress of physical work / required documents throughout the contract
On the top row, select "Deficiencies" module
Select "Add" (*) to create a new report
"Deficiency/Punchdown Report" window will open to fill in all necessary information
When "Physical Work" is selected, associate with an Item Number (there may be some not applicable to an item number; Ex: General clean-up of yard area)


Select "Ok" to save \& add to the "Deficiencies List"
Update the Deficiency information as they progress
Change "Inspection Type" and/or "Status" as necessary until resolved

## Estimates:

Under the "CDSME Menu" select the "Estimates" Module


Flag LS Items:
Lump Sum Items can be flagged as a reminder to be paid when Estimates are generated
Select "Flag LS Items"
Enable flag checkbox for applicable LS Item(s)


Select "Ok" to save \& close

Retainage Setup: (v2.1.03)
Default percentages for Retainage can be edited in the event PTC procedures change
To view or edit percentages for an Estimate type, select "Retainage Setup"


## Estimate History: (v2.1.03)

Select "Estimate History" (\#1)
Select "Estimate Type" (\#2)
Select "Generate New Estimate" (\#3)

"Generate Monthly Estimate" window will open
Select the "Estimate Ending Date" (\#1)
All Master Diary days within the Estimate period must be closed
"Reduce/Override Current Retainage" (\#2): Percentages/Dollars can be changed as required
Default "Retain Percent" for Current is 5.00 and Final is 0.00
"Retainage reduction message" (*) appears after selecting the box

Select "Generate Estimate" (\#3)
Errors $\left({ }^{*}\right)$ : Estimates will not generate if there are validation errors displayed
After Estimate has generated successfully, select "Ok" to return to "Estimate History" window (\#4)


Notice the new Estimate record is added to the list
Select "Estimate Report" in the "Print" column to view, print, or export Estimate Report (\#1)
Select "Fund Report" in the "Print" column to view, print, or export the Fund Report (\#2)
Select "Approve" in the "Action" column to approve the Estimate (\#3)
"View" is available to display names \& dates entered on previously approved Estimates

The "Action" column will not be displayed without appropriate security rights

Select the " $X$ " in order to delete an unapproved Estimate (\#4)


Select "Close" to exit

## Funding Sources

Select "Funding Sources" (\#1)
Select appropriate Funding Source to edit (\#2)
"Funding Sources Update" window will open to complete necessary information (\#3)
Select "Ok" to save \& close the "Funding Source Update" window (\#4)
Select "Add" to enter additional types of Funding Sources (\#5)


Select "Close" to exit

## Cost Drawdown

Select "Cost Drawdown" (\#1)
Enter "Anticipated Monthly Estimate" amounts (\#2)
Select "Add" to insert additional months as needed (\#3)
Select "Delete Bottom Month" to remove the last month if needed (\#4)
Select "Print Report" to view, print, or export the report (\#5)


Select "Ok" to save \& close

## External Invoices

Select "External Invoices" (\#1)

Select "Add" an External Invoice (\#2)
"External Invoice" window will open. Enter applicable information (\#3)

Select "Ok" to save \& exit the "External Invoice" window (\#4)

Select the External Invoice from the "External Invoice List" for editing as needed (\#5)

Select the " $X$ " in order to delete an "External Invoice" as needed (\#6)

Select "Print" (*) from either screen to view, print, or export the External Invoice


Select "Close" to exit

## Change Order:

Change Authorization:
Under the "CDSME Menu" select the "Change Order" Module (\#1)
Select "Change Auth" Module (\#2)
Select "Add" (\#3)


## Additional Work:

Select "Change Authorization Date" (\#1)
Select the appropriate type, this example is "Additional Work" (\#2)
Select "Save" (\#3) to activate the "Select Items" function (\#4)
Attachment reference may be added (\#5)
Upon receipt of signatures on a physical copy, complete the "Approval" fields (\#6)

"Select Items" (\#1) for existing Item(s) to adjust quantity as applicable
Select "Item/Location Details" (\#2) to adjust the specific Plan Locations
"Change Authorization Item Detail" window will open
Select "Add" (\#3) to create a new Item Location

## Updated in v2.1.07, Item Locations may be deleted (not shown below)



Adjust the Plan Location Quantity by entering the value in the "Change
Qty." column
Cumulative "Change Qty." is displayed above (*)

Select "Ok" to save \& close the "Change Authorization Item Detail" window

Enter "References/Remarks" to explain the purpose of this change (\#1)
To keep remarks, select "Save" (\#2)
Select "Print" to generate an Authorization for signatures (\#3)


Select "Ok" to save \& close

## Extra Work:

## Select "Change Authorization Date" (\#1)

Select the appropriate type, this example is "Extra Work" (\#2)
Select "Save" (\#3) to activates the "Select Items" function (\#4)
Attachment reference may be added (\#5)
Upon receipt of signatures on a physical copy, complete the "Approval" fields (\#6)

"Select Items" (\#1) for existing Item(s) to adjust quantity as applicable, or to create a new item "Change Authorization Item Select" window will open

Select "Add Control \#" (\#2) to create a new Item of Work
"Change Authorization Item Detail" window will open
Fill in all necessary Item information (\#3)
Select "Add" (\#4) to create a new Item Location
Enter new Item Location information (\#5)


Note: For LS Items, "Break Price" will be \$1.00. "Change Break Qty." will be adjusted to the value of the approved Force Account/Agreed Price

It is common to create a Control Number with a 0.00 "Change Break Qty."

Refer to the "Additional Work" Change Authorization section for details on completing Select "Ok" to save \& close the "Change Authorization Item Detail" window

Select "Add Control \#" (\#1) to create a new Item of Work
"Change Authorization Item Detail" window will open
Fill in all necessary Item information (\#2)
Select "Copy Locations from Item" (\#3)
Select the Item for applicable Plan Location(s) to copy from (\#4)


Select "Ok" to spawn the "Item Location" entry

The Plan Location has been copied as shown here
These fields can be edited if necessary
"Unit Price" must be entered at this time (*)
If "Unit Price" is not known at this time, use \$0.00


Select "Ok" to save \& close

Provide a description for the Item after the auto-generated Control Number in the "References/Remarks" field

Ultimately this will display in the Change Authorization List as shown


Refer to the "Additional Work" Change Authorization section for details on completing

Filtering of the existing Change Authorizations can be performed with the drop-down menu


## Deselect to show all "Change Authorizations" (\#1)

This column shows the status of each "Change Authorization" (\#2)

## To open an existing CA, double click the row

By default the "Active" box is checked, deselect to render the Authorization void (\#3)


Contact your CDS Coordinator to delete individual Plan Locations from an Authorization once it has been created and saved

## Open End CA:

Work Authorization(s) (WA's) are contained under one single bid item, in this example \#10000000 (PDA Item) and is auto-generated in the authorization

The Commission may issue WA(s) for one or several of the original Bid Items and subsequent WA's may have similar or different Bid Items to which the contractor may be required to submit different Unit Prices

## Select "Change Authorization Date" (\#1)

Select the appropriate type, this example is "Extra Work by Force Account" (\#2)
Select "Save" (\#3) to activate the "Select Items" function (\#4)
Attachment reference may be added (\#5)
Upon receipt of signatures on a physical copy, complete "Approval" fields (\#6)


Choose "Select Items" to open the "Change Authorization Item Select" window (\#1)

Select the row of the item to spawn the authorization (\#2)

"Item/Location Details" feature is now activated for selection


The "ID Field" is utilized to segregate the original bid items from the Work Authorizations as they are generated for the Item Locations provided by each WA

An Open End contract has the original bid items (Ex- MPT Bid02 ID Field) and each Work Authorization may have similar items (Ex- MPT WA-1, WA-4, WA-5, and WA-6 ID Fields)

> Note for MPT below that the original "Bid02" is a PDA, ranges from the specified Mile Posts for the entire contract, and has no quantity versus the WA's for same have the same Item No. as the Bid, are Lump Sums, have specific Mile Post ranges, and have a "Total Change Break Qty." as is similar to Item 4930-0101 shown below

To add Item(s) (new ID Fields) for a new WA, select "Add" (*)
The "Total Change Qty" displays the accumulated "Total Change Break Qty." (*)


For other features refer to the "Change Authorization" sections
Select "Ok" to save \& close

## Change Order Pool:

Under the "CDSME Menu" select the "Change Order" Module (\#1)
Select the "Change Order Pool" Module (\#2)


Select "Add Item(s) to Pool" (\#1)
Select Item(s) to place on the Change Order (\#2)
These can be existing Contract Item(s) or Control Number(s)

Select "Create Control No." (\#3) if required at this time

Refer to the "Extra Work" Change Authorization section for details on completing
Filtering of Items is available (*) if required

Once filter is selected, the icon becomes active for selection to set the filter
To clear the results, select the $Q$ icon, which will not clear any checked items
"Check All" and "Uncheck AII" are available for use (*)

Typically, "Check All" is utilized for a Final Change Order


Select "Ok" to open "Change Order Pool Item" window

Specific detailed information for the Change Order is derived from the Change Order Pool entry
The "CO Quantity" defaults to " 0.00 " and can be manually entered, or it will be populated from the Plan Location(s) selected (\#1)

Select the appropriate "Category" and "Change Type" (\#2)
Enter "Remarks" if required (\#3)
You may select "Item Locations" individually, or use the "Check All" feature below (\#4)

> When processing the Final Change Order, utilize the "Check All" and "Auto-Balance" features for each Item

"CO Qty" may be manually entered (\#5) using the "Overrun/Underrun Qty" amount (*) that is displayed for the selected Item Location


The "Auto-Balanced Selected Location" feature (\#1) automatically displays the selected location(s) Overrun or Underrun value(s) in the "CO Qty" column (\#2)

The sum of the selected location(s) will be displayed in "CO Quantity" (\#3)
A New Plan Location can be added as required (*)


Select "Ok" to save \& close and advance to the next selected Change Order Pool Item if applicable
Wizard features are available, but not mandatory for use:
Selecting "Cancel Wizard" will exit the "Change Order Pool Item" window

If you entered or modified any information you will be prompted to save, which will place the Item into the Change Order Pool

Selecting "Skip Wizard" will automatically place the selected Item into the Change Order Pool

Items in the Change Order Pool are available for edit
Select the Pool Item to edit (\#1)
"Clear" feature is now available for selection (\#2) and will erase the previously entered "CO Qty" (\#3)

In order for the "CO Quantity" (\#4) to reflect a nullified entry, select the "Auto-Balance Selected Locations" feature (\#5)

The "Category", "Change Type", "Remarks", and "Item Locations" may be edited


Select "Ok" to save \& close

Choose the applicable Item(s) from the Pool to "Add to the CO" (\#1) and select "Add Marked Items To Change Order" (\#2) to apply

Items may be individually deleted from the Pool (\#3), or deleted all at once using the "Remove All Items from Pool" feature (\#4)

Search bar is available for use if needed to quickly locate Items that have been pooled (\#5)
Select "Create a Blank Change Order" (*) when submitting a Change Order with no associated items

## Ex: Time Extension

The sum of the Items in the Pool is shown in the "\# of Items Pooled" window (*)


After selecting "Add Marked Items to Change Order" (\#1) "Change Order Pool Control Number" window will open for any selected Control Numbers

Any selected Control Numbers will need to be addressed at this time
Enter the "New Item No." and select the "Funding Code" (\#2)
For 100\% PTC funded projects, the "Funding Code" will be 10

Upon approval of the Change Order, the Control Number will become a contract item and will no longer be available in any Control Number reports


Select "Ok" to save \& close the "Change Order Pool Control Number" window
"Change Order" window will open
Select "Change Order Type" and "Change Order Category" (\#1)
If applicable, select "Add Revised Completion Date", provide date, and justification (\#2)
Select "Add Change Order Reason" and enter a brief synopsis of the reason for the CO (\#3)
If applicable, select "Edit Item No." (\#4) and the "Change Order Pool Control Number" window will open


Select "Close" to exit

## If applicable, select "Add Item From Pool" (\#1)

The "Select CO Pool Item" window will open to incorporate any additional Items
Select the appropriate item


Select "Ok" to complete process and close the "Select CO Pool Item" window Continue this process until all applicable items are added to the Change Order

Once complete, select "Ok" to save \& close

## Change Orders:

Under the "CDSME Menu" select the "Change Order" Module (\#1)
Select the "Change Orders" Module (\#2)


After Item Set Up is complete, the "CO Contingency" value must be set
To change the "CO Contingency" value, select "Change" (\#1)


Once the "CO Contingency" value has been updated, select "Save" (\#2)


Note: An unapproved Change Order can be deleted if necessary (*)

To obtain signatures for Change Order approval, select the Change Order (\#1)
"Change Order" window will open
Select "Print" to generate the Change Order Report (\#2)

## A physical copy must be printed, then signed and dated by all parties involved prior to submitting to the Commission



## For approval, select the Change Order (\#1)

"Change Order" window will open
Select "Approve" to populate the names and dates (\#2)


Upon selecting "Approve", a CDS Contract Export will be auto-generated


Select "Ok" to begin
Once complete, select "Close" to exit the "Export Contract" window
"Enter Commission Approval Date" window will open to enter the date from the Commission executed copy


Upon selection of "OK", the "Change Order Approval Signatures" window will open
Select the Dates based on the physically signed Commission executed copy


Select "OK" to save \& close

## Change Order Justifications: (v2.1.03)

Under the "CDSME Menu" select the "Change Order" Module (\#1)
Select the "Change Order Justifications" Module (\#2)


The Items on an unapproved Change Order appear here to select for justification (\#1)
Select the "Change Order Number" and "Change Type" (\#2)
Typically "ALL" will be selected to view all of the Items that have been justified

Select "Add" (\#3) to create a "Change Order Justification"
Tally of Items that have not yet been justified for the selected Change Order (*)


Select the "Change Type" for the justification to be drafted (\#1)
If necessary, provide additional information in the text field to explain the Change
Type that will be displayed on the Change Order report
"Name" the template being created for future retrieval purposes (\#2) and if necessary, apply a prefix alphanumerical character to the name to sort multiple Change Types of the same designation

This naming information will not be displayed on any reports

Enter additional information in the "Description" text field (\#3)
This descriptive information will not be displayed on any reports

As indicated, the justification window must be saved in order to populate the Q\&A (*)


Select "Save"

After saving, the "Change Order Justification Questions" appear, but first, Item(s) must be chosen by utilizing the "Select Items" feature

This will display the selected "Change Type" items that are available for justification


For a Time Extension, no Item is required to be selected for the Change Order Justification

All questions must still be answered and accompany the Change Order

## Select the Item to "Add to Justification" (\#1)

## Numerous Items may be listed and not all are required to be selected at once as multiple Justifications of the same Change Type

In this example, only one Change Type A was available on this Change Order

Filtering of Items is available $\left(^{*}\right)$ if required
Once filter is selected, the icon becomes active for selection to set the filter
To clear the results, select the $Q$ icon, which will not clear any checked items
"Check All" and "Uncheck All" are available for use (*)

Typically, "Check All" is utilized for a Final Change Order


Select "Ok" to save \& close
"Change Order Justification" window will open with the selected Item(s) displayed (\#1)
Respond to the 8 "Change Order Justification Questions" (\#2)
The question label changes to black font upon being answered; unanswered questions remain in red font

The different questions will appear here as each question label is selected (*)
Features become available once the field is selected (*)
List any "Attachments" for the Item(s) (\#3)


The question labels change to bold font to indicate the active selection


At any time the narrative can be revised or added to
Q1 $\mid$ Q2 $\mid$ Q3 $\quad$ Q4 $\mid$ Q5 $\mid$ Q6 | Q7 | Q8 |
Is this work the consequence of an error or omission on the part of a consultant designer, which resulted Incomplete? in the Commission incurring additional costs?
$\Gamma$

You can revisit the narrative to add information at any time.

The "Incomplete?" check box can be selected to track any incomplete response for each label

## Uncheck once the answer is complete

```
Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 |
```

Why is this work necessary?


The status of the questions is visible on the main "Change Order Justification" window


## Canned Remark:

Generic remarks have been prepared in advance and are available for selection within Q1, Q5, Q6, \& Q8

Select the applicable question (\#1)
Select "Canned Remark" (\#2)
Select the appropriate Canned Remark (\#3)
Select "Ok" to populate the Remark (\#4)
Previously entered question response will be overwritten by the selected Canned Remark (*)

## Note: Canned Remarks should be reviewed in case they require modifications (A warning message will alert as a reminder)



Multiple Items can be selected for the same Change Order Justification if applicable


Select "Ok" to save \& close

## "Change Order Justification" window will open

Items may be deleted if necessary (*)
Multiple "Attachments" should be typed as shown (*) with no indentations


The printed result is shown below:

```
8 - DENTIFY ANY CHANGE THAT AFFECTS MBE/WBE/DB/DBE ITEM QUANTITIES OR PARTICIPATION LEVELS.
ATTACHMENTS
A - Progress Meeting minutes requesting a price, 05/05/17,12 Pgs.
B - Contractor Letter providing price, 05/20/17, 2 Pgs.
C - PTC Letter accepting the price, 0526/17,1 Pg.

\section*{A "Copy" function is available to copy answers from a previously created Change Order Justification (\#1)}

This will overwrite any narrative as indicated by the warning (\#2)
Select "Ok" to initiate the copy (\#3)
This produces a warning (\#4) Select "Yes" to copy and proceed

\section*{Various filters are available for use if needed}


Item(s) can be added at any time (\#1)
Select "Print" to generate the "Change Order Justification" report to review, export, and/or print (\#2)
The "Print" feature in the "Reports \& Analysis" module allows the generation of all CO Justifications for a Change Order all at once instead of individually here


Select "Ok" to save \& close

What If Analysis:
Can be utilized to calculate a future contract cost associated with item changes
Under the "CDSME Menu" select the "Change Order" Module (\#1)
Select the "What If Analysis" Module (\#2)

This module is an optional tool and not a requirement


If applicable select the Unit Price/Lump Sum Item(s) to adjust the Qty. (\#1)
Enter adjustment for the specific ID Field(s) (\#2)
Select "Calculate" (\#3)
Select "Save" (\#4)
After saving, a warning message will display noting that values have been modified (\#5)
Select "Print" to review, export, and/or print the "Change Order-What If Analysis Report" (\#6)
"Allow Row Filtering" is available for "Unit Price"/"Lump Sum" Item/Plan Location filtering if desired (*)
Select "Clear" to eliminate any changes made (*)


Select "Ok" to save \& close

\section*{Materials Field Logs:}

\section*{Concrete Cylinders:}

Under the "CDSME Menu" select the "Materials Field Logs" Module (\#1)
Select the "Concrete Cylinders" Module (\#2)
The Concrete JMF and the Concrete IDR must be entered before cylinder data can be selected; see "JMF's in Contract" under the "Materials Field Logs" section


\section*{Select the date of concrete placement}
"Concrete IDR Cylinder Details" window will open (\#1)

Select "Add" to add "Cylinder Breaks" (\#2)

"Concrete IDR Cylinder Break Details" window will open
Enter the "Cylinder Break Information" (\#1)
Selecting "Test Date" will automatically populate the "Test Day"

Selecting "AT" as the "Break Type" will automatically place a check mark in the
"Acceptance Test?" box

Select "Save" (\#2) to allow entering of the "Cylinder Break Details"


\section*{Enter "Cylinder Break Details" (\#1)}

Entering the "Diameter" and the "Applied Load" automatically populates the "Compressive Strength"
"Avg. Diameter", Avg. Applied Load (Pounds)", and "Avg. Compressive Strength (PSI)" are automatically populated after the "Cylinder Break Details" are entered (\#2)


Select "Ok" to save \& close

\section*{Testing Apparatus:}

Under the "CDSME Menu" select the "Materials Field Logs" Module (\#1)
Select the "Testing Apparatus" Module (\#2)


Select "Add" to add/update a Concrete Cylinder Testing Apparatus (\#1)
Enter all necessary information (\#2)


Select "Ok" to save \& close

\section*{Bituminous Lot Details:}

Under the "CDSME Menu" select the "Materials Field Logs" Module (\#1)
Select the "Bituminous Lot Details" Module (\#2)


Select the row to update the Bituminous Lot Details as necessary
See "Adding a Bituminous IDR" section for additional input procedures


Select "Ok" to save \& close

Select "Bituminous IDR" to review, export, and/or print the report
"Enable Group By Filtering" is available to sort the columns in preferred orders if desired (*)


Select "Close" to exit

\section*{Concrete JMFs \& Bituminous JMFs:}

Under the "CDSME Menu" select the "Materials Field Logs" Module (\#1)
Select the "Concrete JMFs" or "Bituminous JMFs" Module (\#2)


The Concrete \& Bituminous JMFs can be viewed system-wide


\section*{JMF's in Contract: (v2.1.07)}

Under the "CDSME Menu" select the "Materials Field Logs" Module (\#1)
Select the "JMFs in Contract" Module (\#2)


\section*{Contract Level Bituminous JMF's}

Select "Add" for Bituminous JMFs (\#1)
"Create a New Contract Bituminous JMF" window will open

Select an existing System-level Bituminous JMF (\#2)

> As shown below, the blank HMA Template is available and its' usage is highly recommended

Select "Copy Selected JMF" (\#3) to add it to the contract and launch the Bituminous JMF window


Enter "Job Mix Formula" and select a "Material Class", "Date", and "Producer" (\#1)

Select the "Mix Design/Characteristics" tab to enter the "\% Virgin AC", "\% Reclaimed AC", "Max Density Gmm", "Ndes Density Gmb", and "Lbs/Cu. Ft" (Weight) (\#2)

Enter the signatures and dates from the approved JMF (\#3)


Select the "Items" tab to associate contract Item(s) with the Mix Design (\#1)
Select "Save" (\#2) and the "Add" button becomes available for selection (\#3)


\section*{"JMF Bituminous Item Select" window will open}

Select the appropriate item(s) associated with the Mix Design
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|}
\hline \multicolumn{11}{|l|}{§ CDSme Field Office - Project: T-355.00P002 | Contract: T-355.00P002-3-03-[JMF Bituminous Item Select]} \\
\hline 2 & \multicolumn{10}{|c|}{Unit Price Items} \\
\hline & Item No. & Fund & UoM & Item Description & Unit Price & Plan Qty. & Change Qty. & Current Qty. & Actual Qty. & Qty. \\
\hline \(\Gamma\) & 1002-0152 & 10 & EACH & MECHANICAL SPLICE SYSTEM FOR NO. 5 REINFORCEME. & \$23.28 & 12.00 & 0.00 & 12.00 & 0.00 & -12.00 \\
\hline \(\Gamma\) & 1019-0050 & 10 & SY & PROTECTIVE COATING FOR REINFORCED CONCRETE SU_.. & \$30.00 & 438.00 & 0.00 & 438.00 & 111.48 & -326.52 \\
\hline \(\Gamma\) & 1080-0600 & 10 & EACH & RESET EXPANSION BEARINGS, PRESTRESSED CONCRET .- & \$1,200.00 & 24.00 & 0.00 & 24.00 & 0.00 & -24.00 \\
\hline \(\Gamma\) & 1091-0331 & 10 & LF & EPOXY INJECTION CRACK SEAL & \$32.36 & 100.00 & 0.00 & 100.00 & 0.00 & -100.00 \\
\hline \(\Gamma\) & 2005-0007 & 10 & EACH & DYNAMIC PILE LOAD TESTING & \$2.560.00 & 4.00 & 0.00 & 4.00 & 4.00 & 0.00 \\
\hline \(\Gamma\) & 2005-1104 & 10 & LF & STEEL BEAM BEARING PILES, HP12X74 & \$68.41 & 1,465.00 & 0.00 & 1,465.00 & 1,517.59 & 52.59 \\
\hline \(\Gamma\) & 2203-0001 & 10 & CY & CLASS 1 EXCAVATION & \$41.00 & 1,718.00 & 0.00 & 1,718.00 & 1,201.25 & -516.75 \\
\hline \(\Gamma\) & 2203-0004 & 10 & CY & CLASS 1B EXCAVATION & \$40.50 & 851.00 & 0.00 & 851.00 & 815.96 & -35.04 \\
\hline F & 2204-0001 & 10 & CY & CLASS 2 EXCAVATION & \$39.46 & 538.00 & 0.00 & 538.00 & 544.85 & 6.85 \\
\hline - & 2309-0634 & 10 & SY & SUPERPAVE ASPHALT MIXTURE DESIGN. HMA BASE COU... & \$116.21 & 198.00 & 0.00 & 198.00 & 191.44 & -6.56 \\
\hline \(\Gamma\) & 2350-0121 & 10 & TON & SUBBASE (NO. 2A) & \$64.65 & 545.00 & 136.25 & 681.25 & 1,108.54 & 427.29 \\
\hline \(\bigcirc\) & 2409-0661 & 10 & TON & SUPERPAVE ASPHALT MIXTURE DESIGN. HMA WEARING... & \$145.22 & 408.00 & 0.00 & 408.00 & 392.99 & -15.01 \\
\hline V & 2409-0761 & 10 & TON & SUPERPAVE ASPHALT MIXTURE DESIGN. HMA WEARING.. & \$227.17 & 80.00 & 0.00 & 80.00 & 35.60 & -44.40 \\
\hline \(\Gamma\) & 2409-6670 & 10 & TON & SUPERPAVE ASPHALT MIXTURE DESIGN. HMA BINDER C & \$88.44 & 1,188.00 & 0.00 & 1,188.00 & 1,096.19 & -91.81 \\
\hline \(\Gamma\) & 2409-6770 & 10 & TON & SUPERPAVE ASPHALT MIXTURE DESIGN. HMA BINDER C. & \$283.37 & 30.00 & 0.00 & 30.00 & 35.08 & 5.08 \\
\hline \(\Gamma\) & 2491-0064 & 10 & SY & MILLING OF BITUMINOUS PAVEMENT SURFACE, 2* DEPTH & \$45.90 & 460.00 & 0.00 & 460.00 & 176.69 & -283.31 \\
\hline \(\Gamma\) & 2491-0070 & 10 & SY & MILLING OF BITUMINOUS PAVEMENT SURFACE. VARIABL. & \$12.40 & 1,288.00 & 0.00 & 1,288.00 & 1.785.29 & 497.29 \\
\hline \(\Gamma\) & 2601-0393 & 10 & LF & \(18^{*}\) THERMOPLASTIC PIPE, GROUP V, \(7-2.5^{\prime} \mathrm{FILL}\) & \$98.87 & 82.00 & 0.00 & 82.00 & 44.00 & -38.00 \\
\hline \(\Gamma\) & 2601-7014 & 10 & LF & 18* REINFORCED CONCRETE PIPE, TYPEA, \(15^{\prime}-2^{\prime}\) FILL & \$232.00 & 74.00 & 0.00 & 74.00 & 58.00 & -16.00 \\
\hline I & 2604-0353 & 10 & LF & 18* PERFORATED THERMOPLASTIC PIPE, GROUP IIIP. 8'2. & \$98.92 & 149.00 & 0.00 & 149.00 & 149.00 & 0.00 \\
\hline \(\Gamma\) & 2605-0012 & 10 & EACH & TYPE M INLET. STANDARD BOX, HEIGHT \(<=10\) ', CONDITL. & \$3,655.39 & 3.00 & 0.00 & 3.00 & 1.00 & -2.00 \\
\hline \(\Gamma\) & 2605-2030 & 10 & EACH & TYPE C INLET, STANDARD BOX, HEIGHT < \(=10\) ', BICYCLE & \$3,528.79 & 2.00 & 0.00 & 2.00 & 1.50 & -0.50 \\
\hline \(\Gamma\) & 2622-0010 & 10 & LF & REMOVE CONCRETE GLARE SCREEN & \$12.00 & 104.00 & 0.00 & 104.00 & 108.00 & 4.00 \\
\hline \(\Gamma\) & 2622-0025 & 10 & LF & REMOVE AND STORE CONCRETE GLARE SCREEN & \$7.25 & 1,576.00 & 0.00 & 1,576.00 & 660.00 & -916.00 \\
\hline \(\Gamma\) & 2622-0035 & 10 & LF & RESET AND INSTALL CONCRETE GLARE SCREEN & \$8.75 & 1,576.00 & 0.00 & 1,576.00 & 0.00 & -1,576.00 \\
\hline - & 2622-2001 & 10 & EACH & PRECAST PIER TRANSITION & \$5.400.00 & 2.00 & 0.00 & 2.00 & 0.00 & -2.00 \\
\hline & 26,2.nnta & 1 n & IF & DEMMVIE CIMFIF LACE COMICRETE RARDIER \(2 A^{*}\) & el1 nl & 227 nm & n n & 227 nm & 110 mm & \(-175 \mathrm{~nm}\) \\
\hline \multirow[t]{2}{*}{园} & \multicolumn{10}{|c|}{Lump Sum Items} \\
\hline & Item No. & Fund & UoM & Item Description & Unit Price & Plan Qty. & Change Qty. & Current Qty. & Actual Qty. & O/U
Qty. \\
\hline \(\square\) & 0608-0001 & 10 & LS & MOBILIZATION & \$1.00 & 374,500.00 & 0.00 & 374,500.00 & 367.871.44 & -6,628.56 \\
\hline \(\stackrel{\Gamma}{ }\) & 0686-0050 & 10 & LS & CONSTRUCTION SURVEYING. TYPE D & \$1.00 & 70.000 .00 & 0.00 & 70.000 .00 & 49.000.00 & \(-21.000 .00-\) \\
\hline \multicolumn{4}{|l|}{Allow Row Filtering? Г} & & & & & & OK & Cancel \\
\hline
\end{tabular}

Select "Ok" to save \& close

Items are shown in the "Associated Items" section


Additional items may be added to this JMF at any point during the contract

If a new Mix Design is approved, a new Bituminous JMF must be created, meaning this entire process must be repeated

Select "Ok" to save \& close

To copy an existing JMF:
Select the JMF line to be copied (\#1)
Select "Copy Selected JMF" (\#2)


\section*{Update information}

\section*{Select "OK" to save \& close}

\section*{Contract Level Concrete JMF's:}

Select "Add" for Concrete JMFs (\#1)
"Create a New Contract Concrete JMF" window will open

Select an existing System-level Concrete JMF (\#2)

> As shown below, the "Blank Template for Concrete Material Class" is available and its' usage is highly recommended

Select "Copy Selected JMF" (\#3) to add it to the contract and launch the Concrete JMF window


Enter "Job Mix Formula" and select a "Material Class", "Date", and "Producer" (\#1)
Enter the Mix Summary details (\#2)
Enter the signatures and dates from the approved JMF (\#3)


Select the "Items" tab to associate contract Item(s) with the Mix Design (\#1)
Select "Save" (\#2) and the "Add" button becomes available for selection (\#3)


\section*{"JMF Concrete Item Select" window will open}

Select the appropriate item(s) associated with the Mix Design
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|}
\hline \multicolumn{11}{|l|}{2 \({ }_{\text {b }}\) CDSme Field Office - Project: T-355.00P002 | Contract: T-355.00P002-3-03-[JMF Concrete Item Select]} \\
\hline \multicolumn{11}{|l|}{园 Unit Price Items} \\
\hline & Item No. & Fund & UoM & Item Description & Unit Price & \[
\begin{aligned}
& \text { Plan } \\
& \text { Qty. }
\end{aligned}
\] & Change Qty. & Current Qty. & Actual Qty. & O/U Q Q. \(\quad \triangle\) \\
\hline - & 2409-6770 & 10 & TON & SUPERPAVE ASPHALT MIXTURE DESIGN. HMA BINDER C. & \$283.37 & 30.00 & 0.00 & 30.00 & 35.08 & 5.08 \\
\hline - & 2491-0064 & 10 & SY & MILLING OF BITUMINOUS PAVEMENT SURFACE, \(2{ }^{\text {c }}\) DEPTH & \$45.90 & 460.00 & 0.00 & 460.00 & 176.69 & -283.31 \\
\hline \(\Gamma\) & 2491-0070 & 10 & SY & MILLING OF BITUMINOUS PAVEMENT SURFACE, VARIABL & \$12.40 & 1,288.00 & 0.00 & 1,288.00 & 1,785.29 & 497.29 \\
\hline \(\Gamma\) & 2601-0393 & 10 & LF & 18* THERMOPLASTIC PIPE, GROUP V. \({ }^{\text {7 }}\)-2.5 \({ }^{\text { }}\) FILL & \$98.87 & 82.00 & 0.00 & 82.00 & 44.00 & -38.00 \\
\hline \(\Gamma\) & 2601-7014 & 10 & LF & \(18^{*}\) REINFORCED CONCRETE PIPE, TYPEA, \(15^{\prime}-2^{\prime}\) FILL & \$232.00 & 74.00 & 0.00 & 74.00 & 58.00 & -16.00 \\
\hline \(\Gamma\) & 2604-0353 & 10 & LF & 18* PERFORATED THERMOPLASTIC PIPE, GROUP IIIP, 8'-2. & \(\$ 98.92\) & 149.00 & 0.00 & 149.00 & 149.00 & 0.00 \\
\hline V & 2605-0012 & 10 & EACH & TYPE M INLET. STANDARD BOX, HEIGHT \(J=10\) ', CONDITL. & \$3,655.39 & 3.00 & 0.00 & 3.00 & 1.00 & -2.00 \\
\hline - V & 2605-2030 & 10 & EACH & TYPE C INLET. STANDARD BOX, HEIGHT \(\langle=10\) ', BICYCLE. & \$3,528.79 & 2.00 & 0.00 & 2.00 & 1.50 & -0.50 \\
\hline - & 2622-0010 & 10 & LF & REMOVE CONCRETE GLARE SCREEN & \$12.00 & 104.00 & 0.00 & 104.00 & 108.00 & 4.00 \\
\hline \(\Gamma\) & 2622-0025 & 10 & LF & REMOVE AND STORE CONCRETE GLARE SCREEN & \$7.25 & 1,576.00 & 0.00 & 1,576.00 & 660.00 & -916.00 \\
\hline \(\Gamma\) & 2622-0035 & 10 & LF & RESET AND INSTALL CONCRETE GLARE SCREEN & \$8.75 & 1.576.00 & 0.00 & 1,576.00 & 0.00 & -1,576.00 \\
\hline \(\Gamma\) & 2622-2001 & 10 & EACH & PRECAST PIER TRANSITION & \$5,400.00 & 2.00 & 0.00 & 2.00 & 0.00 & -2.00 \\
\hline \(\Gamma\) & 2623-0053 & 10 & LF & REMOVE SINGLE FACE CONCRETE BARRIER, 34* & \$11.00 & 237.00 & 0.00 & 237.00 & 112.00 & -125.00 \\
\hline \(\Gamma\) & 2624-0100 & 10 & LF & RIGHT-OF-WAY FENCE, TYPE 2 & \$11.00 & 296.00 & 0.00 & 296.00 & 0.00 & -296.00 \\
\hline \(\Gamma\) & 2624-0301 & 10 & FAC.H & FND POSTS FOR TYPF ) RIGHT-OF-WAY FFNC.F & \$1.90 00 & 600 & 0 O & 600 & 0 O & -600 \\
\hline \multicolumn{11}{|l|}{2} \\
\hline & Item No. , & Fund & UoM & Item Description & Unit Price & Plan Qty. & Change Qty. & Current Qty. & Actual Qty. & O/U \\
\hline \(\Gamma\) & 2901-0001 & 10 & LS & MAINTENANCE AND PROTECTION OF TRAFFIC & \$1.00 & 380,000.00 & 0.00 & 380,000.00 & 360,330.00 & -19,670.00 \\
\hline \(\Gamma\) & 3953-0401 & 10 & LS & RADIO COMMUNICATIONS SYSTEM, MODIFIED & \$1.00 & 9,250.00 & 0.00 & 9,250.00 & 9.250 .00 & 0.00 \\
\hline \(\Gamma\) & 4000-0001 & 10 & LS & INSTALLATION OF AQUA PENNSYLVANIA, INC. FACILITIES & \$1.00 & 222,000.00 & 0.00 & 222,000.00 & 222,000.00 & 0.00 \\
\hline \(\Gamma\) & 4000-0002 & 10 & LS & INSTALLATION OF PECO ENERGY ELECTRIC FACILITIES & \$1.00 & 98,000.00 & 0.00 & 98,000.00 & 98,000.00 & 0.00 \\
\hline - & 4000-0003 & 10 & LS & INSTALLATION OF VERIZON PENNSYLVANIA INC. FACILIT-- & \$1.00 & 74,000.00 & 0.00 & 74,000.00 & 74,000.00 & 0.00 \\
\hline \(\Gamma\) & 4000-0021 & 10 & PDA & EXISTING TRAFFIC SIGNAL TIMING CHANGES & \$1.00 & 5,000.00 & 0.00 & 5,000.00 & 0.00 & -5,000.00 \\
\hline \(\checkmark\) & 4010-0001 & 10 & LS & BRIDGE STRUCTURE, AS DESIGNED, DB-237 (S-34644) & \$1.00 & 2,530,000.0 & 0.00 & 2,530,000.0 & 2,511,568.5 & -18.431.48 \\
\hline \(\Gamma\) & 9901-0102 & 10 & LS & Installation and Maintenance of Type SM-1 Flexible Posts & \$1.00 & 0.00 & 10,000.00 & 10,000.00 & 8.032 .69 & -1,967.31 \\
\hline \(\Gamma\) & CTRL-0001 & 10 & LS & SR 0513 Detour Static Sign & \$1.00 & 0.00 & 0.00 & 0.00 & 0.00 & 0.00 \\
\hline \(\Gamma\) & CTRL-0005 & 10 & LS & Installaton and Maintenance of Type SM-1 Flexible Posts & \$1.00 & 0.00 & 0.00 & 0.00 & 0.00 & 0.00 \\
\hline \(\Gamma\) & CTRL-0006 & 10 & LS & Grade adjust existing manhole to proposed grades & \$1.00 & 0.00 & 0.00 & 0.00 & 0.00 & 0.00 -1 \\
\hline r & CTOI Mnnt & 1 n & \({ }^{1}\) &  & eral & n \({ }^{\text {a }}\) & 0 nm & 0 n & 0 nm & n \(\mathrm{nr}^{-1}\) \\
\hline \multicolumn{9}{|l|}{Allow Row Filtering? 「} & OK & Cancel \\
\hline
\end{tabular}

Select "Ok" to save \& close

Items are shown in the "Associated Items" section


Additional items may be added to this JMF at any point during the contract

If a new Mix Design is approved, a new Concrete JMF must be created, meaning this entire process must be repeated

Select "Ok" to save \& close

\section*{Soil Samples:}

Under the "CDSME Menu" select the "Materials Field Logs" Module (\#1)
Select the "Soil Samples" Module (\#2)


Select "Add" to enter the "Soil/Aggregate Sample" details


Select "Ok" to save \& close

QA/QC Samples:
Under the "CDSME Menu" select the "Materials Field Logs" Module (\#1)
Select the "QA Samples" or "QC Samples" Module (\#2)


Works in conjunction with CDSme QA \& QC applications for importing information to be available for viewing here

\section*{Adjustments:}

\section*{Diesel Fuel:}

Under the "CDSME Menu" select the "Adjustments" Module (\#1)
Select "Diesel Fuel" Module (\#2)


\section*{Enter the "Bid Proposal Price Index" from the contract documents (\#1)}

Make sure to check all Addendums for a revised Price Index

The "Price Adjustment Fluctuation is automatically populated by CDS

Select "Add" to enter the applicable Items (\#2)
Select the Item(s) from the drop down menu which will populate the Fund, Description, and Unit (\#3)


\section*{Select the Category from the drop down menu}

Fuel Factor will be auto-populated if the Item does not have a Depth

The Depth field will automatically open to input a Depth when required based on the Item's description

Fuel Factors are programed internally and cannot be edited

If you specification does not match, contact your CDS Coordinator


Once all Diesel Fuel Item(s) are entered, select "Add" to enter the "Fuel Price Fluctuations" (\#1) Enter the Monthly Price found on the ECMS website (\#2)

Date is not required to be a full month's time span
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline 2 & & \multicolumn{3}{|l|}{Enter Fuel Price Fluctuations} & \multicolumn{2}{|c|}{Add...} \\
\hline & Price & Date From & Date To & Summary & Detail & \\
\hline * & \$ & & & Print & Print & X \\
\hline
\end{tabular}

2

To acquire the Monthly Price(s) go to http://www.dot14.state.pa.us/ECMS/
If you do not have an existing User ID, you may enter ECMS as a guest

\section*{Login}
\(\square\)
User ID: \|
Password: LOGIN

Click here if you would like to enter ECMS as a guest.

From the "Construction Projects" menu column (\#1), select "Resources" (\#2), and then "Asphalt-Diesel Prices" (\#3)

Find the appropriate month and year for the applicable Diesel Fuel monthly price to be entered into CDS (\#4)

Typically \(\$ /\) Gallon is used, however, if your job is in metric units, use the \(\$ /\) Liter price


After the Monthly Fuel Price Fluctuation(s) are entered, reports may be generated
Select "Print" under Summary monthly (\#1)
Select "Print" under Detail when there are Price Fluctuations resulting in a price adjustment for that period (\#2)


Refer to the PCDS Documentation Guide for naming convention
Upload reports to the PCDS

Wizard feature is available for use if needed

\section*{Select "Add via Wizard" (\#1)}

Select Category from the drop down menu (\#2) which will populate the list with all available Items for that category

Notice the "Must Exceed" \& "Total" fields are blank at this time (*)


Select "Add All" (\#1) to check all Items (\#2) listed of the selected category

\section*{Items may also be selected/unselected individually}

Notice the "Must Exceed" \& "Total" fields are now populated (*)
Select "Hide" to remove an Item from the category (*)


Select "Ok" to save \& close
Repeat this process for each category as applicable

Items from the Wizard are populated onto the "Diesel Fuel Price Adjustment" window


Select "Ok" to save \& close

\section*{Bituminous:}

Under the "CDSME Menu" select the "Adjustments" Module (\#1)

Select "Bituminous" Module (\#2)


Refer to the "Diesel Fuel" Adjustment section for details on entering the Price Index and Fluctuation data (*)

Within ECMS, be sure to utilize the appropriate district for the applicable Monthly Price for the region where your contract is located

Select "Add" to enter the applicable items listed in the contract documents (\#1)
If the Item(s) are a liquid, select the "SY to Gals" column (\#2) and enter the "Residue Appl. Rate" (\#6)
Enter the Item's Depth in inches (\#3), Density/Specific Gravity (\#4), and \% Virgin Asphalt (\#5) as applicable and shown on the approved utilized Mix Design

This information will need updated as the job progresses


Select "Ok" to save \& close

DBE/DB \& Payroll:

\section*{DBE/DB Reports:}

Under the "CDSME Menu" select the "DBE/DB \& Payroll" Module (\#1)
Select "DBE/DB Reports" Module (\#2)


Select the "DBE/DB Goal Type" (\#1) as per contract documents
By selecting "Not specified" or "Not specified, good faith effort requested" the Goal/Level percentage fields are not available

If a percentage was entered for a Goal/Level, and something other than "As per contract documents" is accidentally selected in the future, it will delete the previously entered percent values

Enter the "Goal/Level" that is specified in the contract (\#2)
For OE Contracts there are no Goal/Levels specified, however, they may be added

Select "Add" to enter "DBE/DB Reports" (\#3) information from the contractor's supplied EO-402
The committed and contracted amounts for DBE/DB subcontractors are to be provided by the contractor and input into the Contract Maintenance module


\section*{Select the applicable "Report Date" (\#1)}

The first report is typically the first month of the contract, even if there is no data
These reports should be generated monthly (concurrently) for the duration of the contract

Select "Save" to allow entering of report data (\#2)
After saving, "Not Yet Saved" (*) will change to "Enter"


Select "Enter" to open the report (\#1)
Enter applicable data obtained from the EO-402 (\#2) \& (\#3)
Multiple Check Number's may be entered for any subcontractor

Subcontractors are automatically selected, deselect to remove; "Add/Edit Contractors" and "Print Monthly Status" features are also available for use if applicable (*)

The monthly status total dollar values should be compared with the EO-402 for accuracy

The Payment Detail "Print" feature generates payment information for the specific subcontractor on the row selected (*)


Select "Ok" to save \& close

\section*{Select "Print Contract Status" to generate the report}


Refer to the PCDS Documentation Guide for naming convention
Upload the report to the PCDS

\section*{Certified Payroll:}

Under the "CDSME Menu" select the "DBE/DB \& Payroll" Module (\#1)
Select "Cert. Payroll" Module (\#2)


The "Project Year" will default to the current year (\#1)
Select "Add" to generate a "Payroll Week" (\#2)
Select the "Week Ending" date for the Prime Contractor's payroll (\#3)
After the initial entry, the week ending date will be auto-generated

In this example, the week ending date was not by default because the calendar year has ended

After saving (\#4), "Not Yet Saved" (*) will change to "Enter"
All payrolls will initially show as "Outstanding" for any documented contractor (on an IDR) (*)


Fill in all applicable information (\#1)
Select "Add" to enter a new "Contractor" that was not noted on a previous IDR for that period (\#2)
Select Contractor from the drop-down list (\#3)
The Contractor name(s) will be auto-generated in this column based upon the IDR documentation for the week selected (*)


Select "Ok" to save \& close

The table below displays the status of the aggregate contractor payrolls for each week Not all payrolls will be indicated as "Reviewed"

Follow the most recent review guidelines for the Certified Payroll process

The table information should be edited at any time as new information is received


Select "Ok" to save \& close

Reports \& Analysis:

\section*{Signature Setup:}

Typically signature titles will not need edited, however, if the need arises this is the process
Under the "CDSME Menu" select the "Reports \& Analysis" Module (\#1)
Select "Signature Setup" Module (\#2)


\section*{Select the "Report" from the drop-down that requires editing}


Select "Add" (\#1)
From the added signature line, select "Show Date" if applicable (\#2)
Existing check boxes in the "Show Date" column may be selected/deselected

Select the "Title" of the signatory agent from the drop-down (\#3) for the new line or to modify an existing signature title
"Delete Last Line" feature is available for use if needed (*)


Select "Ok" to save \& close

\section*{Run Reports:}

Under the "CDSME Menu" select the "Reports \& Analysis" Module (\#1)
Select "Run Reports" Module (\#2)


\section*{Select the " + " to the left of the Report Category (\#1)}

Select the applicable report to be rendered (\#2)
Select "Run Report" (\#3) to generate
"Report Viewer" or "Select Item Book Filters" window will open with various filter options (\#4)

\section*{Item Book reports offer a greater range of filters}

Select "View Report" or "Print" to generate the detailed data (\#5)


The "Enterprise" Report category offers a drill-down feature within the report to view greater detail
After selecting your report topic (\#1 and \#2) select the "Print Layout" icon (\#3) to display the drill-down features (+)

Select the (+) to expand the data level(s) of information (\#4, \#5, and \#6)


Select "Close" to exit

\section*{Calendar:}

Under the "CDSME Menu" select the "Reports \& Analysis" Module (\#1)
Select "Calendar" Module (\#2)


The project calendar begins the numbering from the Notice to Proceed date entered into CDS
The weather data is displayed as entered into the Master Diary
Select "Print Preview" to generate the report for printing purposes


Select "Close" to exit

Construction Management:

\section*{Submittals:}

This feature is currently disabled


\section*{Import/Export Contract(s):}

It may be necessary to import a contract for various reasons
Only certain permission levels can perform this task, if you need to import a contract and do not have the rights, contact your CDS Coordinator

A requirement for the CDS operator is to generate backups (Exports) on a regular basis
Refer to current procedures for frequency requirements

Select "Tools" (\#1)
Select "Import/Export" from the drop-down menu (\#2)
Choose to "Export Contract" or "Import Contract" (\#3)
Prior to importing a contract that already exists on the database, the existing contract must first be deleted

"Export Contract" window will open with the "CDS Field Office Application" selected by default as indicated by (*)

The "CDS QA or CDS QC Application" can be selected for a required backup after the FO backup is completed (refer to current procedures for frequency requirements)

The "Folder" and "File Name" are auto-generated

The "Folder" is the file path where the backup can be found for future upload to the PCDS

The "File Name" contains the contract number, date, time stamp, user name, version of CDS, and type of backup (Field Office-Field Office or Field Office-Quality Assurance Quality Control)

The "File Name" can be modified to suit the scenario (eg: ...FO-FO_FINAL)

Select "OK" to begin the export process (\#1)

Notification message will indicate the export process is complete (\#2)
Select "Close" to exit the "Export Contract" window (\#3)


Each time a backup is generated, it can be located in the following file path (\#1) which was shown in the Export Contract window

The FO-FO contract backup can be copied from this location (\#2)
This process can be done for FO-QAQC as well (*)


If there is more than one CDS Contract, all may be exported at one time
Select "Tools" (\#1)
Select "Import/Export" from the drop-down menu (\#2)
Select "Export all Contracts" (\#3)
- CDSme Field Office - Project: T-220.00T001 | Contract: T-220.00T001-3-04


This is the file path to retrieve the FO-FO backups
The feature is also available for the FO-QAQC as shown below


If there is more than one CDS Contract, all may be exported at one time as one file
This process is only required as requested from your CDS Administrator

The backup can be used to restore the CDS program to the status of the most recent Database Backup available

Select "Tools" (\#1)
Select "Import/Export" from the drop-down menu (\#2)
Select "Backup Database" (\#3)
웅
CDSme Field Office - Project: T-220.00T001 | Contract: T-220.00T001-3-04


The file name will be auto-generated and the retrieval path is shown below
Select "OK" (\#1) to generate the file and the window will alert noting completion (\#2)


\section*{Exiting CDS:}

To exit CDS from most any screen, hover the curser and select the red " \(X\) "

\section*{Window will prompt the user for verification}



\section*{Addendum No. 1}

RFP \# 19-40120-8569

\section*{Multi-Platform Construction Documentation System (CDS)}

\section*{Prospective Respondents: You are hereby notified of the following information in regard to the referenced RFP:}

\section*{QUESTIONS AND ANSWERS}

Following are the answers to questions submitted in response to the above referenced RFP as of June 10, 2019. All of the questions have been listed verbatim, as received by the Pennsylvania Turnpike Commission.
\begin{tabular}{|c|c|c|c|c|c|}
\hline \multicolumn{3}{|l|}{\multirow[b]{2}{*}{Proposer Questions}} & \multicolumn{3}{|l|}{Pennsylvania Turnpike Commission (PTC)} \\
\hline & & & \multicolumn{3}{|l|}{RFP \# 19-10380-8547} \\
\hline \# & Page & Section & Section Description & Proposer Question & Commission Response \\
\hline 1. & & & & What is the approximate expected size of the database? Is there a legacy database on which to base it? & Current CDS database size: 8GB Yes, the awarded contractor will have access to the code, schema, and database of the existing system. \\
\hline 2. & 66 & & Maintenance & What is the system availability expectation ( \(99 \%\) ? \(99.9 \%\) ? 99.99\%)? & Not including regularly scheduled maintenance and upgrades, the expected availability of the production system will be \(99.99 \%\) on a yearly basis. \\
\hline 3. & 19 & IV-3 & Requirements & How many inspections would a mobile device be expected to hold in offline mode? In the document, it says the inspector will sync before and after each shift. Approximately how many inspections is that? & Inspectors are required to submit their reports daily. Most inspectors only submit 1-2 reports per day. \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|c|}
\hline \multicolumn{3}{|l|}{\multirow[b]{2}{*}{Proposer Questions}} & \multicolumn{3}{|l|}{Pennsylvania Turnpike Commission (PTC)} \\
\hline & & & \multicolumn{3}{|l|}{RFP \# 19-10380-8547} \\
\hline \# & Page & Section & Section Description & Proposer Question & Commission Response \\
\hline 4. & 19 & IV-3 & Requirements & Approximately how much data will the inspector be collecting during an offline session? & Data from most reports would normally be no more than 1-2 MB per day. But could go be as high as 100MB if video and/or pictures are part of the report. \\
\hline 5. & & & & Do you have any specific requirements around what meetings should be onsite? Are there any hard requirements one way or the other? We generally conduct the project kickoff meeting, JAD sessions, UAT support, training and go live support onsite & Expected on-site meetings: Project kick-off, biweekly progress meetings, joint application design meetings, user acceptance testing, training, and golive support. \\
\hline 6. & & & & Are you looking to have data migrated from a legacy system? & No. All existing projects that are in the current CDS will be completed using that system. \\
\hline 7. & & & & This document references Exhibit X but it doesn't appear to be included/attached. Is this available anywhere? & Exhibit X is a place holder in Appendix A Standard Agreement. These exhibits will be updated when the agreement is negotiated/finalized. \\
\hline 8. & & & & \begin{tabular}{l}
This is a mechanical question regarding the RFP package, and not a programmatic question: There are document links embedded within the RFP PDF file (some XLS files, some DOCX files, and some PDF files). Those embedded files don't appear to open. I have tried this on a couple of different computers, both Mac and Windows. \\
Are those referenced documents available elsewhere?
\end{tabular} & The requested documents are attached to the RFP Adobe file posted on our website. \\
\hline
\end{tabular}

All other terms, conditions and requirements of the original RFP dated May 22, 2019 remain unchanged unless modified by this Addendum.```

