

Documentation for SiteManager / LIMS – Project Materials to Final Materials – 19

1. SCOPE

The intent of this chapter is to provide the Region personnel guidance on materials documentation from the beginning of a project to the closure of the project files when using SiteManager® Materials and the Laboratory Information Management System (SMM/LIMS). The materials documentation on a project needs to be accurate, complete, and processed within the official established timeframe after the issuance of the project's Final Acceptance Letter per Section 105.21(b). The Department has stipulated that the Final Material Certification Checklist (Form 473 SMM) located on the CDOT Forms website, will be signed electronically by the Region Independent Assurance representative, Region Materials Engineer, Project Engineer, Project Tester, and the Resident Engineer within 30 calendar days of the project's acceptance to ensure that the quality of the project is maintained and to avoid legal and contractual conflicts.

2. GENERAL REQUIREMENTS

The procedures referenced are to be followed as indicated for CDOT projects' electronic documentation. The materials documentation procedure begins at the Materials and Geotechnical Branch in the Documentation Unit with the creation of the Materials Documentation Records, CAR (CDOT Application for Reporting) Reports. These reports are as follows:

- CODE – Project Material Items Report
- Checklist – Owner Acceptance Sampling & Testing Checklist
- Checklist – Certification Checklist Report

The Region Materials Laboratory will review and edit the:

- Independent Assurance Sampling & Testing Checklist (Form 379)

Materials Documentation records are to be prepared and reviewed as found in this chapter. Details on documentation procedures for project items are contained in the applicable sections of this manual, and they cover most situations encountered, but exceptions may require special attention.

3. CDOT PROJECTS – RESPONSIBILITIES & PROCEDURES

The Project Engineer, as the representative of the Chief Engineer, is responsible for the materials documentation on a project. The Project Engineer shall take measures to ensure that the documentation procedures of the Department and the Region are followed. All referenced documentation activities within Sections 3.1, 3.2, and 3.3 of this chapter, are the responsibility of the Project Engineer or designee.

3.1 BEFORE CONSTRUCTION

NOTE: Verify that the project materials tester assigned to the project has attended the CDOT SiteManager® Materials/LIMS Training class.

Access Request Form (ARF):

Consultants shall use the Non-Project Specific (NPS) contract and end date when submitting the (ARF).

Determining when the ARF is necessary to be completed and submitted to CDOT OIT. Verify the end date that was documented on the previous ARF submitted by the consultant. If the end date of the previously submitted ARF will expire before the end date of this project's Task Order, a new ARF must be submitted. However, if this project's Task Order will expire before the end date on the previously submitted ARF, it is not necessary to submit a new ARF for the project. Access to CDOT's applications is based on the end date in the system for the consultant, not on a per project basis. Consultants shall use the **NPS Contract** for their company when

submitting the ARF. The Project Task Order contract shall **NOT** be used as the contract on the ARF. The end date of the project task order is usually a shorter duration than the NPS. The consultant NPS contract is generally 2-3 years in duration. If the ARF is not necessary, obtain contract authority from the Finals Administrator for the consultant. When an updated ARF is submitted, and the consultant is an **existing** Site Manager user, Contract authority can be granted at any time by the Finals Administrator. If the consultant is a **new user** to Site Manager, contract authority cannot be given until the consultant has been granted access from OIT to the eVPN, SMM/LIMS, and the CDOT SAP NetWeaver Portal (CAR). Allow a minimum of 20 business days for access to be granted. Once notice has been received that access has been granted the Project Engineer must contact the Region Finals Administrator requesting project personnel be given Contract Authority for the project.

1. Review the Project Plans, Project Special Provisions (PSP), and Standard Special Provisions (SSP) to become familiar with any modified materials and testing procedures.
2. Review the CAR report – **Project Materials Item Report**. An item that has a red code of **No Testing Assigned** is a flag for the project tester. The project tester shall investigate the item in the PSP, SSP, plans, and FMM, to determine what materials and tests will be required to complete the item. This information must be conveyed to the Central Lab Pavement Design Program or the Region Lab Manager. The materials codes, tests and frequencies shall be added to meet the testing specifications.
3. Review the Owner Acceptance Sampling & Testing Checklist and Certification Checklist Reports to ensure that sampling frequencies, material codes, and tests represented by each item match the Project Special Provisions and the Field Materials Manual. Any deficiencies or errors must be documented and reported by e-mail to the Pavement Design Program at North Holly to have corrections made. Example #1: Item 411 Emulsion - the contractor is using SS-1H, the Certification Checklist under Item 411 has CSS-1H material code. The material code will need to be changed to reflect the correct product being used. Example #2: Item 304 ABC Class 6 Special, the Owner Acceptance checklist lists the material code (703.03.08.00) for aggregate ABC, the Project Special Provision (PSP) for this item states that recycled concrete, recycled asphalt or a blend of recycled asphalt/aggregate can be used if it meets the gradation specification listed in the PSP. The contractor states they will be using 2 stockpiles of material. One is recycled concrete (703.03.10.00) and the other is RAP/aggregate blend (703.03.15.00). Both material codes for these stockpiles will need to be added under the item, and the aggregate ABC material code will need to be removed as that product will not be incorporated into the project. Tests required for each material shall reflect the requirements of the PSP. The Project Engineer shall be aware of the types of tests required and the frequencies of each test that the project Owner Acceptance tester will be performing.
4. The Region Materials Engineer or designee will notify the Project Engineer that the Independent Assurance Sampling & Testing Checklist (Form 379) has been reviewed and is available in CAR. The Project Engineer shall be aware of the type of tests and frequencies of these tests that the Independent Assurance (IA) tester is required to performed. It is the Project Engineer's or designee's responsibility to notify the Region Material Engineer's Independent Assurance technician of upcoming materials that will require Independent Assurance sampling and testing.
5. Project Tester shall setup the Project Materials Electronic Folder to store the documentation for the project. **See example of electronic folders for documentation on page 36 of this chapter (Addendum 3)**. Follow the format in Organizational Guide for Project Material documentation in Section 8.0. **Binders and hard copy documents are not required.**

6. All documentation pertinent to each sample record shall be uploaded into the attachment icon. This must be completed before the sample record is Authorized and Complete in the LIMS window – Review Sample. All documentation must have the Sample ID clearly recorded on each form / worksheet. This includes all CDOT forms and worksheets either completed electronically or hand written. Hard copies are not required to be retained.
7. Samples submitted to the Central Laboratory do not require a hard copy of the CDOT Forms 157, 82, 83, 84, 411, and 1304 to be submitted with the sample if an email is shown on the form for the lab unit receiving the sample. Email the **completed** form to the appropriate lab's email address. Sample IDs are required to be clearly documented on each form.
8. All forms and worksheets not available as electronically fillable that are hand written shall be scanned and uploaded into the attachment icon for each record. Complete this action before the sample has been completed in Review Sample window.
9. Review the chapter in the Field Materials Manual - Special Notice to Contractors. Alert the contractor to the requirements of this chapter and the materials that will require the submittal of a Contractor's APL-QML Verification (AQV) Letter and the CDOT Form 595 representing the material. Ensure the contractor is aware of the items that will require submittals for Certificate of Compliance (COC) or Certified Test Report (CTR). Do not use the CDOT Form 211 for this request. Create an Excel spreadsheet to track the COC/CTR's required, received, and accepted or rejected. This spreadsheet can be used to notify the contractor and Project Engineer of the status of submittals. **See example on page 35 in this chapter (Addendum 3).**
10. Attend pre-construction, pre-pave, pre-pour, scheduling, and Owner Acceptance (OA)/Process Control (PC) meetings.
11. Contractor shall submit at the Preconstruction meeting a list of proposed materials and the manufacturer of each material. Project personnel must evaluate that the proposed materials are on CDOT's Approved Products List (APL) or Qualified Manufacturers List (QML) for applicable items, per CP 11. CDOT's Approved Products List can be found at the site below.
<https://www.codot.gov/business/apl>
12. Materials supplied to the project that are not required to be selected from the CDOT's APL or QML – must meet the requirements for documentation of Section 106.12 and 106.13. The Project tester shall confirm that the Producer/Supplier (P/S) of the materials are in SiteManager® (SM) within the Producer/Supplier list. The material codes for the materials they produce must be associated to that P/S under Producer/Supplier Materials. For any P/S and associated material codes that are not in SM, use the form "Add Producer/Supplier/Material Code" found at the following link, under the tab "Hints, Guides, and Links", and submit the completed form to the Region Materials Lab Manager or the Pavement Design Program at Central Lab - North Holly. Contact information can be found in "Contacts" at the link below. Open the link in Chrome or Edge. Do not use Internet Explorer. Download documents from this site to your computer. Open your Download folder and save the documents to your computer.
<https://sites.google.com/a/state.co.us/sitemanager-materials/>
13. Develop Random Sample Schedules as per CP 75 for each item requiring random sampling. Random sampling schedules are required for all materials. Excel spreadsheets can be used to generate the random schedules. Schedules must be created for the entire item quantity before construction begins. Random Sampling Schedules can be accessed from the SMM site listed in #12, on the home page. Creation of daily random schedules is not acceptable. Do not share the random schedules with the contractor or PC tester.

14. Obtain from the contractor, any proposed concrete mix designs to be used on the project. Submit all required documentation electronically for mix design approval with a completed CDOT Form 1188 to the Concrete Unit at North Holly. Obtain the most recent CDOT Form 1188 at: <https://www.codot.gov/library/forms>. **A concrete mix shall not be allowed to be placed on the project until the Concrete Unit has reviewed and approved the mix for the project and the CDOT Form 1373 has been issued.** A CDOT Form 1373 must be issued for mixes from the CDOT Pre-Approved Concrete Mix Designs list and all new concrete mix designs. The CDOT Form 1373 shall be given to the contractor/supplier for the concrete batch tickets to reflect the correct CDOT concrete mix ID.
15. Determine the requirement of aggregate samples to be submitted for Asphalt Job Mix Formula approval per CP 52. Contact the Region Materials Engineer to determine if sampling is necessary or if the materials have been recently tested for another project. It is recommended that enough samples be taken for Central Lab and any labs that will be performing correction or correlation testing for asphalt content. This includes the PC testing firm. Samples shall be combined and split to minimize variations. For information to submit aggregate samples per CP 52, see the instructions – CP 52 Submittal Guide. This document can be found at: <https://sites.google.com/a/state.co.us/sitemanager-materials/> in the Hints, Guides, and Links tab.
16. Coordinate with the Project Engineer, contractor, and PC technician to schedule a pre-testing meeting. Follow CP 16, Pre-Testing Meeting Agenda (CDOT Form #1322) if applicable.
17. Check the CDOT Forms website to download the most recent revision of any forms to be used on the project. Forms previously serialized can be found on the CDOT Forms website. Access to the previously serialized forms is under the menu “CDOT Resources” – Forms

Serialized. These forms will require the project to establish field sheet numbers unique to the project. The process will be a 10 digit field that starts with the five digits of the contract ID, not using the “C”, followed by a “dash” followed by a 4 digit sequential number. The project materials personnel shall develop a list of 4 digit sequential numbers. Careful documentation must be done to strike out numbers that have been used. Groups of numbers may be established for each item estimating the needed amount based on quantities. Numbers 0001 to 0099 are **NOT** to be used by the field testers. These are reserved for the Region Labs. Instructions for the serialized form protocol is available in the chapter Materials Forms - Instructions & Examples.

3.2 DURING CONSTRUCTION

1. Samples obtained for preliminary testing, approval for use, and meeting the requirements of 1 per project / 1 per source ARE NOT to be counted toward meeting the sampling and testing requirements for OA tests for Gradation, Atterberg Limits, and Soil Classification.
2. Sample and Test according to the Random Sample Schedule (CP 75) for each applicable item. Be aware of the frequencies of tests on the Owner Acceptance Sampling & Testing Checklist Report.
3. Communicate daily with Project Engineer and inspectors about placed quantities, activities, planned production, and material deliveries to ensure inspection and testing frequencies are met.
4. Project Engineer shall communicate with all project personnel the field-adjusted quantities from Contract Modification Order (CMOs) and Minor Contract Revisions (MCRs). When CMO or MCRs involve materials that will need to be tested, the Project Engineer must update the items as soon as possible for the tester to access the necessary information to begin the testing.
5. When a CMO or MCR is approved and the Project Engineer has updated the items or quantities in SiteManager®, the

CAR reports will automatically reflect the changes. Verify the materials, material codes, tests and testing frequencies for these added items is correct. Notify the Region Lab Manager with any concerns.

6. Alert the Region Material Engineer's IA technician of CMO or MCR's that include changes for revised quantities and/or added materials to assist them in verifying the changes appear on the CAR Report - Independent Assurance Sampling & Testing Checklist (Form 379).
7. Complete and file in the appropriate folder/subfolders all daily worksheets or CDOT Forms in the Project Materials Electronic Folder. Document Sample ID's on each worksheet and/or CDOT Forms to identify the record.
NOTE: Summary forms such as CDOT Form #6, #58, #69, #156, #212, #323 are not required.
8. Complete documentation daily in SiteManager® Materials for sample record entries.
9. In LIMS, enter test results as soon as they become available.
10. Test results entered into LIMS **must be reviewed thoroughly** in the LIMS windows – **Review Test** and **Review Sample**. It is unacceptable for test results to be passed through these windows without a detailed review. The project tester will complete the review in these windows to verify data entry and accuracy of results.
11. Field Testers shall **not** Authorize and Complete or Void any sample records that are not in the Statewide Field when in the LIMS window "Review Samples". To eliminate this issue, field testers shall set their filter to "Lab Unit" and "FieldLab". **FieldLab** must be input exactly as shown, click the "Apply" button. It is the responsibility of all the other lab managers to review and authorize samples in their labs. This setting will allow the field tester access to samples that are in the statewide field lab, and no other samples. This filter will not change after logging in and out.
12. For HMA, SMA and concrete paving sample records, it is advisable to **NOT** Authorize and Complete in LIMS –

Review Sample window, the last 2-3 samples for each mix design and **all** longitudinal joint cores. These records shall be reviewed thoroughly for correct test result entries in Review Test window. Leaving the sample records in Review Sample window allows the tester to access the records to edit the quantities to reflect the final quantities paid by the Project Engineer.

13. For HMA, SMA, or concrete paving, review the CAR reports – Asphalt Quality Level Report for accuracy of Acceptance Method, Total Cost/ton, HMA Cost/ton, AC Cost/ton (for binder paid separately), Mix ID, test results, quantities, and processes. For Concrete Quality Level Report, confirm the Acceptance Type, Bid Item Unit Price, Mix ID, thickness, test results, quantities, and processes are correct. These reports must be sent to the Project Engineer and contractor daily. Asphalt 03 and Voids 03 are longer acceptable programs. **The CAR - Asphalt Quality Level report is required to be used for all projects advertised on or after January 1, 2018.**
14. Complete CDOT Form 626 daily for each item's test results and obtain contractor's electronic signature verifying that the contractor has been notified of all test results. Complete the form and sign electronically, email to the contractor for their electronic signature and have the contractor return it. Send a copy to the Project Engineer and place the signed form in the Project Materials electronic folder in the corresponding item tab. CAR reports, Asphalt Quality Level and Concrete Quality Level reports can be substituted for the Form 626. The CAR reports for HMA, SMA, and concrete paving should be sent to the Project Engineer and contractor daily. These emailed reports may serve as notification to the contractor of tests results. The CDOT Form 626 may not be required for these items.
15. For materials submitted to Central Lab at North Holly, and all Region Labs for testing, Sample ID's are required on forms and/or CDOT sample tag 633 or sample label 634. Tags and labels are available at Central Lab, North Holly

location. Contact the CDOT North Holly Pavement Design Program, to schedule obtaining the tags and labels. All other forms are available on the CDOT website as electronically fillable. Some CDOT forms have an email address listed for the different Units within Central Lab. Use these emails to submit completed forms to these Units, do not submit a hard copy with the sample. Form 157's are not required to be completed and submitted for the sample when CDOT Form 633 (Sample Tag) with a revision date of 5/17 is used, no form required. When Form #633 with a revision date of 4/14 is used, the CDOT Form 157 is required to be completed and emailed to the lab(s) that were shown on the test tab window. See lab emails below.

16. CDOT Forms 411 and 1304 are required to be completed and submitted for all samples. The CDOT Form 157 is not required with new tags.

17. The Central Lab Unit emails are:

bit.lab@state.co.us

chem.lab@state.co.us

cdot_conc.lab@state.co.us

euro.lab@state.co.us

flex.lab@state.co.us

cdot_phpr.lab@state.co.us

cdot_soils.lab@state.co.us

cdot_pavement.design@state.co.us

NOTE: Samples submitted without a Sample ID will not be accepted nor will testing be started until a sample record is completed in SiteManager®.

18. Verify the documents submitted and file in the electronic folder for the Certification Checklist, all Certificates of Compliance (COCs) or Certified Test Reports (CTRs) received for materials. These documents are required before installation or payment for the materials is completed. Electronic copies of COC/CTRs must be uploaded to each sample record using the attachment icon. Copies of the electronic COC/CTR's shall be stored electronically and are submitted with the final documents. Hard copies of the COC/CTR's are not required for documentation. Any COC/CTR's and Contractor's APL-QML Verification (AQV) documents submitted electronically or hard copy by the

contractor must have the required stamps and signatures according to Section 106.12 and 106.13.

CDOT Form 157s are not required to be completed for COC/CTRs documentation.

19. Inform the Region Materials Engineer's IA representative of upcoming materials to be sampled and tested per the CAR Independent Assurance Sampling & Testing Checklist (Form 379) at least three days prior to material placement.
20. Monitor the Owner Acceptance Sampling & Testing Checklist Report to ensure the testing frequencies are being met as material placement progresses.
21. Monitor the CAR Report Summary of Samples – COC and CTR reports to track material quantities paid are matching quantities of documentation received from the contractor. The SM sample record quantity cell shall be updated to reflect the amount of material shown on the COC/CTR's. Upload recently received COC/CTR's in the sample record Attachment Icon.
22. Compare the OA and CERT Checklists with the monthly estimate for discrepancies in items or quantities appearing on the CAR reports. Access the project estimate here: <https://www.codot.gov/content/payestimates/> Use Control key & "F" to use the "Find" feature, type in the contract ID without the "C". Locate the latest estimate to complete the review. A hard copy of the estimate is not needed for this check. If discrepancies are noted, contact the Region Lab Manager or Pavement Design Program at Central Lab for assistance.
23. Perform price adjustment calculations monthly prior to the cutoff date for the estimate in accordance with Sections 105.03 and 105.07 of the Standard Specifications. Verify price adjustments are reflected in the contract estimate.
24. As exceptions to the Specifications occur, document each occurrence to facilitate the completion of CDOT Form 474 Explanation of Exceptions at the closure of the project.
25. Review the CAR reports, Asphalt Quality Report & Concrete Quality Report daily to

ensure the reports accurately reflect the sample records created in SMM and that the results input into LIMS appear on the report. For instructions to complete the sample records correctly, utilize Addendum 1 on page 23-27 of this chapter. These CAR reports replaces Asphalt03 and Voids03 programs and they are no longer to be used on projects advertised after January 1, 2018. When creating concrete paving sample records for Item 412, utilize **Addendum 2 on page 28-33 of this chapter**. The CAR report Concrete Quality Level report replaces Cobcrete03.

26. Review PC data and tests results daily for compliance. Use CP12A, CP12B, and CP12C as applicable.
27. Review data entries to ensure accuracy of test results, and sample review as soon as possible to keep the Owner Acceptance Sampling & Testing Checklist Report up to date.
28. Use CAR Reports - Summary of Samples – COC and Summary of Samples – CTR to track COC and CTR samples created, quantities of materials delivered, attachments, and sample status. These reports will update when data is changed and saved in SiteManager. COC and CTR records can be left in the LIMS windows of Review Tests or Review Sample allowing the record to be available to upload more documents of shipments that are delivered to the project. Keep the quantity cell updated in SiteManager® Materials – Basic Sample Data tab with the total quantities verified on the attached COC/CTR's.
29. Use CAR reports, Summary of Samples - All to track samples that are incomplete.
30. Resident and Project Engineers can use the CAR Reports – Summary of Samples – COC and CTR to verify quantities and documentation has been received for materials that will be paid on the monthly estimate.
31. Participate in weekly material testing and scheduling meetings to be up to date on project materials incorporation and deliveries.

3.3 After Construction

NOTE: Project Owner Acceptance personnel are to review the materials documentation 100% by completing each of the following steps, 3.3 - 3.3.2

1. In each electronic item tab, arrange the completed and signed CDOT Form 626s first (if applicable), sort and arrange all documents within the item sequentially by date (beginning with the first test number, ending with the last test number). Naming forms correctly can facilitate the order. Use the CDOT Field Sheet number and/or test number or lot number for identification of each form contained in the folder.
2. Verify with the Project Engineer that the last progress estimate has been completed and authorized for payment. This ensures the quantities shown on the Owner Acceptance Sampling & Testing Checklist Report are accurate. Project estimates can be accessed at this link. <https://www.codot.gov/content/payestimates/>. Use Control – F, input the Contract ID without the “C”, in the find box. This will highlight the project, look for the latest estimate. Open the estimate, use Control – F, and input the item number in the find box to search by item.
3. Verify on the Owner Acceptance Sampling & Testing Checklist Report, that there are no incomplete tests by ensuring that the Sampled Tests to Date column is equal to the Completed Tests to Date column. Discrepancies must be reconciled by either completing the sample record or voiding it.
4. Verify that the minimum sampling and testing requirements have been met by checking the **Completed Total Tests to Date** column is equal to or greater than the **Required Total Tests to Date** column. Use the CAR report – Summary of Samples – ALL to find sample records that are not complete. After reconciling the columns, the Owner Acceptance Sampling & Testing Checklist Report shall be placed in the electronic documentation folder - Final Documentation. Deficiencies are required to be explained on the CDOT Form 474 Final Materials Certification - Explanation of Exceptions.

5. Review the CAR Report – Asphalt Quality Level (AQL) (Final). A Final report showing errors shall not be accepted and errors must be corrected.
6. Review the AQL report to verify the number of tests shown on the report equals the Completed Tests to Date for each test method shown on the Owner Acceptance Sampling & Testing Checklist Report. Asphalt content element may be the total tests completed for CP 85 and CP-L 5120 to meet the requirements. Mat Density element may be the total tests completed for CP 82, CP 44, and CP 81 to meet the requirements.
7. Verify the quantity for each element in the report matches the quantity for the item on the Owner Acceptance Sampling & Testing Checklist Report. The quantities for each element must be equal or the report will state an error on the first page of the report.
8. Verify with the Project Engineer the dollar amount shown on the AQL report is correct on the estimate.
9. Notify Staff Materials Pavement Design OA/PC Program Manager at cdot_pavement.design@state.co.us and the Region Materials Engineer that the Quality Level reports for the project are complete. Record the Contract ID and Final AQL in the subject line. Export the Final report and include in the email.
10. Export the Final QL report and save to the project electronic files - Final Documentation folder.
11. Check all inputs to Concrete03 and the F-test and t-test documents for accuracy if Concrete03 is used on the project. Concrete03 and F-test and t-test documents must have the data files sent to Staff Materials Pavement Design OA/PC Program Manager and the Region Materials Engineer. All QL reports must be the “Final Report”. This ensures that all element quantities reconcile.
12. When the CAR Report - Concrete Quality Level Report (CQL) for concrete paving is used by the project, check the final report according to Section 3.3.5, 3.3.6, 3.3.7, and 3.3.8.
13. Notify the OA/PC manager at cdot_pavement.design@state.co.us that the report is complete. Record the Contract ID and Final CQL in subject line. Export the report and include in the email.
14. Place the Final QL reports in the project electronic files - Final Documentation Folder. **See example on page 34 of this chapter (Addendum 3).**
15. Place electronic copies of the notification emails sent and acknowledgement from the OA/PC manager in the Final Documentation Folder. This is a requirement for the Final Documentation Materials Coordinator to verify the OA/PC manager has received the information that the project Quality Level reports are complete.
16. Verify COCs and CTRs have been received by ensuring Certs Received to Date column on the CAR Certification Checklist, has a 1 or greater value, for any item showing a quantity paid. Verify Summary of Sample – COC and CTR records have the required attachment noted by showing an asterisk for each sample record. Verify the quantity shown on the Summary of Samples report equals or exceeds the quantity paid, if not an explanation of missing COC/CTR's shall be in the Explanation of Exceptions. Items with a zero quantity, no explanation required. Items deleted by CDOT Form 105 completed by the Project Engineer can be deleted from the project CAR Reports. Send the completed Form 105 to the Central Lab – Pavement Design email to request the items to be removed. Record in the subject line the **Contract ID: Items to Remove from CAR Reports by Form 105.** cdot_pavement.design@state.co.us
17. Review CAR reports –Summary of Samples – (ALL) to verify all samples created for the project have a status of “COMP” It is a requirement that all sample records created for a project are in the “Complete” (COMP) status before the materials documentation is accepted. Sample status of: LOGD, RECV, TEST, PREA, must be either completed or voided.

18. Sample records created in SMM that may have been started, but has not had tests assigned will be in the Pending status. These samples may have been forgotten about or made by mistake. The samples must be VOIDED. These types of samples in the Pending status will not be on the Summary of Samples reports. The Sample Backlog report must be reviewed to ensure no samples are in SM incomplete. See instructions on the SMM website. <https://sites.google.com/a/state.co.us/sitemanager-materials/> Projects cannot be closed until all samples are either in the Complete or Void status.
19. Export and save the CAR Report - Summary of Samples – COC, CTR, QA, and ALL to the project electronic materials folder – Summary of Samples subfolder for availability to the checker for the final documentation review.
20. Pre-inspected items shall have CDOT Form #193, if applicable. This document shall be in the attachment icon on the SMM record for the item.
21. Check all Price Reductions and the supporting documents.
22. Ensure the contractor's PC documentation has been received electronically for HMA, SMA, PCCP, and Excavation & Embankment per the requirements of CP 12A, CP 12B, CP 12C respectively. Save the PC documentation into the Project Electronic Folder.

3.3.1 CDOT Form 474, - Final Materials Certification - Explanation of Exception for CAR report: Owner Acceptance Sampling & Testing Checklist Report.

1. Document on the CDOT Form 474, the date the project was accepted and the date the final documentation is complete. This date shall be the same date that appears on the final copy of the Owner Acceptance Sampling & Testing Checklist. Obtain Project Acceptance letter from the Project Engineer for verification of date of project acceptance. **See example on page 17-19 of this chapter.**
2. Reference type of tests not used on the Owner Acceptance Sampling & Testing

- Checklist due to alternative methods completed.
3. Verify and document all shortages of required tests as indicated on the Owner Acceptance Sampling & Testing Checklist Report.
4. Explain quantities and dollars applied per the Quality Level reports. Explain process changes, compaction test sections, and any unusual change in the Quality Level reports. **See example on page 18 -19 of this chapter.**
5. For items that show a Zero Total Quantity Installed, no explanation is required as this indicates no material was installed on the project.
6. Explain and attach supporting documents for material with Percent of reduction in contract price (P) less than 3.
7. Explain and attach supporting documents for material with price reduction (P) greater than or equal to 3.
8. Explain and document all material repaired or replaced for (P) greater than 25.
NOTE: Reference to (P) values are addressed in Standard Specifications, Section 105.03.

3.3.2 CDOT Form 474 Final Materials Certification - Explanation of Exception for CAR report: Certification Checklist Report.

1. Verify and document all missing COCs and CTRs as indicated on the Certification Checklist and deficiencies in quantities that are shown on the CAR report Summary of Samples – COC and CTR reports. COC/CTRs documentation that was not received from the contractor, do NOT make sample records. Document these deficiencies on the CDOT Form 474.
2. Verify the required stamps are applied to the COC/CTRs and/or Contractor's APL-QML Verification (See FMM chapter - Special Notice to Contractors, for more information) and that the required information is complete on each stamp.
3. For COC/CTRs received, sample records in SiteManager® must have the documents uploaded through the attachment icon. Verify the attachment by checking the Summary of Sample –

COC or CTR Report. An asterisk will be shown under the column "Attachment" for each sample record with an attachment.

9. For items that show a Zero Total Quantity Installed, no explanation is required as this indicates no material was installed on the project. Attach CDOT Form 105 – Deleted Items - for documentation to the CDOT Form 474.

4. Independent Assurance Sampling & Testing Checklist and CDOT Form 473 – Final Materials Certification Checklist

1. The Region's Independent Assurance (IA) representative shall initiate the Final Materials Certification Checklist - Form 473, by completing the top portion, electronically signing the form, and obtaining the Region Materials Engineer's electronic signature. This form is available on the CDOT website under the Forms catalog.
2. The Region's IA representative is responsible for documenting any deficiencies shown on the CAR Independent Assurance Sampling & Testing Checklist Report on the Form 474, Explanation of Exceptions.
3. The Region's IA representative shall ensure that differences between Independent Assurance tests results and Owner Acceptance test results if any, are explained.
4. The Region's IA representative will send the completed documents for Independent Assurance testing to the project personnel. Submit the Final Materials Certification Checklist (Form 473, top portion completed) and CAR Report - Independent Assurance Sampling & Testing Checklist, Form 474, Explanation of Exceptions, and supporting documentation. The Form 473 and 474 shall be electronically completed and signed, and emailed to the Project Engineer. The Project Engineer shall verify the project tester completes and signs the required section. The Independent Assurance Sampling & Testing Checklist, supporting documentation, shall be part of the final documentation submittal.
5. Project personnel and the Resident Engineer's signature is required on the

CDOT Form 473. The completed form must be part of the final documentation with the CDOT Form 474 Final Materials Certification – **Explanation of Exceptions** for the project.

6. For projects tested by a consultant firm, the CDOT Form 1324 must be completed by the CDOT Representative responsible for the over-site of project materials for evaluating performance of the consultant firm.
7. Transfer all files from the electronic project materials folder to ProjectWise. Follow the path:
ContractID/Construction/Materials.
Do not use the **Final Documentation/Form 325 folder** in ProjectWise to store these documents. The Region Final Materials Documentation Coordinator or the Finals Administrator is responsible to transfer the required documents from the Materials file to ProjectWise Final Documentation/Form 325 Packet.

5. Independent Review Requirements for Final Materials Documentation Completion

The Resident Engineer or his designee will notify the Region Finals Administrator or the Region Final Materials Documentation Coordinator when the materials files have been deposited into ProjectWise and are ready for review. This review provides a greater degree of independence and critical evaluation. The Finals Administrator or their designee will check the following items.

1. Verify on the Owner Acceptance Sampling & Testing Checklist that the number of tests shown under Required Total Tests to Date column has been met or exceeded in Completed Total Tests to Date.
2. Verify Sampled Total Test to Date column and Completed Total Test to Date column, match on the entire document. If any discrepancies are found between these two columns, the tester must be notified to reconcile the columns and the final should not be considered complete until the issue is resolved. Verify that all samples records created for the project have a status of

- Complete by reviewing the CAR report Summary of Samples – **All** report.
3. Verify that all required Certificates of Compliance (COCs) or Certified Test Reports (CTRs) have been received by reviewing the Certification Checklist Report. Certs Received to Date column must show a minimum of one for any item that has an amount shown in Total Installed Quantity for the item. Deficiencies must be explained on CDOT Form 474 Final Materials Certification - Explanation of Exceptions.
 4. Project Testers are required to upload COC/CTRs containing the contractors stamp (and other required documentation per the FMM chapter - Special Notice to Contactors and the Standards Specification Sections 106.12 and 106.13), into the attachment icon in SiteManager® for each sample record. Using the CAR report - Summary of Samples – COC and CTR, perform random checks in SiteManager® ensuring the documents are in compliance and in the attachment icon. Ensure an asterisk is shown for every sample record for COC and CTR on the CAR reports.
 5. Verify on the Independent Assurance Sampling Checklist - Completed Tests to Date column, the required number of tests are completed. Ensure any deficiencies of tests are documented on the CDOT Form 474.
 6. Differences between the IA and OA test results must be explained on CDOT Form 474 if applicable.
 7. Verify the CDOT Form 473, - Final Materials Certification Checklist has been completed and all required signatures are present.
 8. Verify pre-inspected items have a CDOT Form #193, when applicable.
 9. Check explanations and calculations for material accepted at full price, material with price reductions, and material removed and replaced.

NOTE: Reference to P is addressed in Standard Specifications, Section 105.03.
 10. Verify the CAR Reports – Quality Level for applicable items (Asphalt or Concrete Paving) have no errors on the Final Report. Final reports showing errors are not acceptable. The first page of the Final Report will show any errors the program has found.
 11. Verify the number of each test type completed on the Owner Acceptance Sampling & Testing Checklist, Completed Test to Date column, matches the number of tests shown on the CAR Report – Quality Level for asphalt and concrete paving items, if applicable.
 12. Verify the quantity for each element in the CAR Quality Level report matches the quantity for the item on the Owner Acceptance Sampling & Testing Checklist Report and the estimate. Check all items that apply to the element for total quantity paid. This includes asphalt and concrete paving items.
 13. Verify the Quality Level payment is correct on the last progress estimate.
 14. Verify that the documents for Quality Level reports have been submitted to the Region Materials Engineer and Staff Materials Pavement Design Program OA/PC Manager by e-mail receipt on file.
 15. CDOT Form #1324 must be completed and distributed to the Region Materials Engineer and placed in ProjectWise – Form 325 packet.
 16. As part of the final Progress Estimate, the Project Engineer has included all the documentary evidence needed to show that the contractor has complied with the requirements of the Contract Plans and Specifications for all materials used in accordance with the CDOT Field Materials Manual - Quality Assurance Procedures for Construction and Materials Sampling and Testing chapter (Owner Acceptance Frequency Guide Schedule for Minimum Materials Sampling, Testing, and Inspection). The Region Finals Administrator is responsible for the development and signature of CDOT Form #325, Final Estimate Data, page 1 and 2, and the distribution per Table 1, and shall be included in this process.
- If the existence of discrepancies or unresolved differences remains, a meeting will be scheduled with the Finals Administrator or Finals Documentation Coordinator, Resident Engineer, and Project Engineer to resolve the issues.

The completion of the Form 473 - Final Materials Certification Checklist and Form 474 Final Materials Certification - Explanation of Exceptions is required within 30 calendar days after the final acceptance of the project in order to achieve a timely closure. All signatures must be completed electronically on Form 473 and Form 474. If after the project task order is ended, anyone who receives missing documentation and completes SMM/LIMS entries shall complete another Form 474 to update the changes made as missing item documentation is completed. CDOT Form 473 and Form 474 is a requirement for the closure of each project.

6.0 CDOT Form #211-Completion Instructions (Materials Documentation Request)

The Final Materials Documentation Project Closeout and the Final Materials Documentation

Review or Audit activities will discover that occasionally required documents will be missing. Individuals performing the closeout, review, or audit should use this form or comparable e-mails to allow for a paper trail in the effort to obtain the missing documents. The original project personnel may have misplaced or lost a field materials worksheet or report. The contractor may have not forwarded required COCs and CTRs. Time is critical, indicate a due date and follow through immediately if that date has passed. If e-mail queries are being used, write in the "Subject", CDOT Materials Documentation Request or CDOT Form #211. Attach the resolution Form #211s or e-mails to the Form 474 Final Materials Certification Explanation of Exceptions Report.

7.0 Distribution of Materials Documentation

Table 1. Documentation Distribution

CDOT SiteManager® Project Final Materials Documentation Packet

| Documentation Order | Form / Report | Distribution | | | | |
|---|-------------------|--------------|---------|--------|--------|--------|
| | | #1 | #2 | #3 | #4 | #5 |
| Final Materials Certification Checklist with required documents | Form 473 | Orig. | Notify | Notify | Notify | |
| Final Materials Certification - Explanation of Exceptions with supporting documentation (letters, CMOs, MCRs, etc.) | Form 474 | Orig. | Notify | Notify | Notify | |
| CAR Report - Owner Acceptance Sampling & Testing Checklist | Form 250 | Orig. | Notify | | Notify | |
| CAR Report - Certification Checklist | - | Orig. | Notify | | Notify | |
| CAR Report - Independent Assurance Sampling & Testing Checklist with supporting documentation | Form 379 | Orig. | Notify | Notify | Notify | |
| Random Sampling Schedules | - | Orig. | | | | |
| Price Reduction Documentation | - | Orig. | | | | |
| CAR Quality Level Reports - Incentive/Disincentive documents | CAR Report QLR | Orig. | Notify | | | Notify |
| Buy America Certification letters and Monthly Summary reports | | Orig. | | | | |
| PC Data results digital records | | Orig. | | | | |
| Evaluation of Materials Testing (Consultant tested) | Form 1324 (CP 16) | Orig. | Notify. | | Notify | |

Note: Orig. = original with signature and placed into ProjectWise. Project Engineer will notify the Region Finals personnel when the documentation is available in ProjectWise.
 Notify = shall email a link to the Units under Distribution list that all documents are available in ProjectWise as Final. The link referred to is the exact location within ProjectWise for the Project's files.

Distribution

- #1 Resident/Project Engineer Electronic Files placed into ProjectWise under the path – Contract ID/Construction/Materials
- #2 Region Materials Engineer/Region Finals administrator is responsible for verifying the documentation is complete and acceptable by placing all files into ProjectWise under the path – Contract ID/Construction/Finals Documentation/Form 325 and email a link to notify #3, #4, and #5 that the final documents are available
- #3 FHWA (Oversite Projects)
- #4 Staff Materials Pavement Design Program (Documentation Unit)
- #5 Staff Materials Pavement Design Unit OA/PC Manager

Email address for #4 and #5 is: cdot_pavement.design@state.co.us

For Final Documentation, in subject line record Contract ID - Final Materials Documents in ProjectWise.

The Region Final Materials Documentation Coordinator or the Region Finals Administrator is responsible for the items in Table 1 are uploaded into the following ProjectWise path:
 Contract ID/Construction/Finals/Form 325 Packet.

8.0 ORGANIZATIONAL GUIDE FOR PROJECT MATERIALS Electronic Folder

SCOPE

The Field Materials Manual includes the “OA Frequency Guide Schedule for Minimum Sampling, Testing, and Inspection”. This is the essential document to use when determining which CDOT Forms, worksheets, COCs, CTRs, and miscellaneous documents are required.

Utilize this Organizational Guide for Project Materials Electronic Folder to initially develop the folder and subfolders per the sections for the Owner Acceptance Sampling & Testing Checklist Report. Follow the Item numbering sequential order on the report to develop the order of each sub-folder. See page #36 of this chapter. For the Certification Checklist Report, create one folder to house all the COC/CTR submittals, naming each document according to item number, date received, and/or shipment number. This will facilitate adding each document to the attachment icon much easier.

The Project Materials Electronic Folder shall contain main folders that represent Item Numbers, with subfolders representing materials within the item. Documents shall be arranged in order of tests numbers or documents, oldest to newest (1, 2, 3, 4, etc.) or dates.

Summary of Samples – All, COC, CTR, IAT, and QA reports, 1 copy of the final reports is to be placed within the project electronic folder.

Final Materials Electronic Folder:

- CDOT Form 473 - Final Materials Certification Checklist
- CDOT Form 474 – Final Materials Certification – Explanation of Exceptions with any supporting documentation
- CAR Report – Owner Acceptance Sampling & Testing Checklist
- CAR Report - Certification Checklist
- CAR Report - Independent Assurance Sampling & Testing Checklist and supporting documentation
- CAR Report - Summary of Samples- ALL, COC, CTR, IAT and QA reports
- Random Sampling Schedules (copy - original to remain in item number folder)
- Price Reductions - if applicable
- Quality Control Notebooks (digital) for all required elements
- CAR Final Quality Level reports (copy - original to remain in item number folder)
- CDOT Form #1324, Evaluation of Materials Testing (CP 16) if applicable

CAR Owner Acceptance Sampling & Testing Checklist

Create the Project Materials electronic folders in the order the items appear on the Owner Acceptance Sampling & Testing Checklist.

Within each folder, place field worksheets in numerical order starting with test #1. Place CDOT Forms pertaining to the item, Mix Designs, QPM's, Price Reductions, Random Schedules, and supporting documentation as necessary to complete the item.

CAR Certification Checklist Folder

Create the Certification Checklist electronic folder. Within in this folder, COC/CTR documents shall be clearly named to identify the item, date received, and/or load number the document represents. It is recommended to **not create sub-folders** for each item as this creates extra steps to attach the document to the Site Manager record.

CDOT Form 157s **are not** required to be completed for COC/CTR documentation. The documentation received from the contractor must meet the requirements of Section 106.12 and 106.13 of the Standard Specifications for Road and Bridge Construction. Determine required documentation from the Field Materials Manual, OA Frequency Guide Schedule for Minimum Materials Sampling, Testing and Inspection, and the “Special Notice to Contractors” chapters. Each COC or CTR received must be uploaded into the attachment icon on each sample record in SiteManager® for the quantity and material the COC/CTR covers. Multiple COC/CTR’s can be added to one sample record. As more attachments are added to the record, keep the quantity cell updated to reflect the total quantity cover by the attachments. Name and describe each attachment to identify it.

For materials from the APL or the QML that the contractor is electing to use on the project, it is recommended that the SiteManager® record be developed as soon as possible, due to the fact materials may expire from the APL or QML at any time. Creating the record when the documentation is received ensures the record reflects the material appears on the corresponding lists at the time of approval.

NOTE 1: “Special Notice to Contractors” chapter shall be used to determine the requirements of the Contractor’s APL – QML Verification (AQV) document to notify the project personnel of materials to be used on the project from the CDOT Approved Products Lists (APL) or the CDOT Qualified Manufacturers List (QML).

ATTENTION!

Referenced CDOT Materials Forms, except those indicated as “computer output”, have been revised in 2017. All of these forms state: *Previous editions are obsolete and may not be used.* The use of Materials Forms older than what is indicated in the chapter of the FMM Materials Forms – Instructions & Examples is not authorized.

The examples of completed forms is ongoing as some will show examples and some will not.

| | | |
|---|--|-----------------------------|
| COLORADO DEPARTMENT OF TRANSPORTATION Final Materials Certification Checklist | Contract ID Region | Project No. Location |
| The Independent Assurance Sampling Schedule for this project has been substantially followed and the test results of the IA samples are in reasonably close agreement with the project acceptance (O/A) sample test results. Exceptions to this statement have been previously commented on and documented when the test results were reported or are explained on an attached sheet. Independent Assurance (IA) samples were tested with independent equipment unless noted on CDOT Form 474 - Explanation of Exceptions, see attached. | | |
| Project ▼ | | |
| Method of Acceptance for Item 403: | | |
| 1) IA Summary Report (Form #379), attached with IA Explanation of Exceptions..... | N/A ▼ | |
| Project Materials Lab Inspected by: | Date of inspection: | |
| Final IA Review Region Materials Engineer | IA Tester Signature | |
| Project Tester - Document all shortages of tests, missing COC/CTR's and explain all quality level incentives/misincents, price reductions and include supplemental documents as required on the CDOT Form 474- Final Materials Certification Explanation of Exceptions. | | |
| 2) CDOT Form 474 - Final Materials Certification Explanation of Exceptions with supplemental documentation as required..... | N/A ▼ | |
| 3) Completed O/A and Certification Checklists..... | N/A ▼ | |
| 4) Completed Random Sampling Schedules (all required elements)..... | N/A ▼ | |
| 5) Quality Control Notebooks (digital) for all required items..... | N/A ▼ | |
| 6) Evaluation of Materials testing, Form 1324..... | N/A ▼ | |
| 7) Buy America monthly summary reports..... | N/A ▼ | |
| 8) Project Engineer has verified Pavement Structural Design Data is complete..... | N/A ▼ | |
| Project Acceptance Date: | | |
| Project Engineer: ensure O/A Sampling & Testing Checklist, Certification Checklist and IA Checklist have met the minimum required testing. Explanation of Exceptions, Buy America summaries, Pavement Structural Design Data is complete. All documentation has been reviewed and placed in Project\Wise in the path ContractID/Construction/Materials. This is to Certify that: The results of the tests on the acceptance samples indicate that the material incorporated in the construction work, and the construction operations controlled by sampling and testing, were in conformity with the approved plans and specifications; and such results compare favorably with results of the Independent Assurance sampling and testing. This form is complete, includes all attachments, and has been reviewed and accepted. | | |
| Project Engineer: | Resident Engineer: | |
| <input type="checkbox"/> Region Finals Materials Documentation Coordinator or the Region Finals Administrator has verified items 1-8. O/A Sampling Checklist, Certification Checklist, IA Checklist and all documentation is complete. Check for COMP status on Summary of Samples (All) Report. <input type="checkbox"/> All items have been properly documented and placed into Project\Wise under the path: ContractID/Construction/Finals Documentation/Form 325 Packet | | |
| Region Finals Materials Documentation Coordinator or the Region Finals Administrator | | |

| | | | | | |
|--|--|--|--|-----------------|--|
| Colorado Department of Transportation Final Materials Certification Explanation of Exceptions | | Contract ID: | Region: | Page 1 of _____ | |
| | | Project Acceptance Date: | | | |
| | | Project Number: | | | |
| | | Project Location: | | | |
| <input type="checkbox"/> Owner Acceptance | <input type="checkbox"/> Independent Assurance | Contractor: | | | |
| <input type="checkbox"/> Innovative Contract | <input type="checkbox"/> Local Agency | Project Final Documentation Completion Date: | | | |
| <input type="checkbox"/> Other: | | CDOT or Consultant Company Name: | | | |
| Electronic signature of Project Tester or Project Engineer | | | | | |
| CDOT Project Sampling and Testing by Consultant: YES <input type="checkbox"/> NO <input type="checkbox"/> | | See instructions at the bottom of page | | | |
| CAR - Quality Level Reports | | | | | |
| FINAL CAR report | Data Reviewed by: | | Data Checked by: | | |
| <input type="checkbox"/> Asphalt Quality Level | Name and Signature: | | Name and Signature: | | |
| <input type="checkbox"/> Concrete Quality Level | Name and Signature: | | Name and Signature: | | |
| | | | | | |
| Instructions: Use the tabs at the bottom for additional pages. Insert total page numbers completed in the top right of each page. Header information will populate to all pages from Page 1. Explain all shortages of tests, missing COC/CTR's, price reductions. Explain CAR Quality Level Report processes, pay factor of 1, quantity discrepancies and total incentive/disincentive payments. Final package shall include all supporting documentation for price reductions, CMO/MCR's, CDOT Form 105 detailing deleted items by the PE. See FMM Documentation chapters - After Construction - for more information All Quality Level Reports must be Final Report with no errors. | | | Consultant Firm PE Signature and Electronic or Wet Stamp | | |

Example of Explanations of Exceptions

Use CDOT Form 474 Final Materials Certification – Explanation of Exceptions

CAR Report Owner Acceptance Sampling & Testing Checklist:

Item 203-00060: Embankment Material (Complete in Place): Contractor placed 4,115.00 CY of Embankment Material 2 inches thick. Material too thin to perform CP80aa Den/Moist Content of soil by nuclear gauge. Project specials required PI of 5-15, test result of 13. Project Engineer accepted material.

Embankment, Rock not encountered on project.

Item 304-06007 Aggregate Base Course (Class6)

CP23aa not needed based on T180D performed which includes the plus 4 material.

CP25- Not performed due to small quantity and no change in material observed.

Based on the quantity of 2,113 CY (2 -T89 and T90's) should have been completed. The second test would have covered the fraction of the 113 CY. Based on the results of test #1 -T89 (No Value) and the T90 (Non Plastic), the 2nd test was not completed to cover the 113 CY.

Item 403-34741: Hot Mix Asphalt (Grading SX) (75) (PG 64-22)

Mix ID: 42017B1_20856_

Both Phase 1 and Phase 2 of the US 24 El Paso- Elbert county line projects were completed by Jones Contractors utilizing the same mix designs, the PC tester and the mobile voids trailer personnel were the same. For this reason check testing and CPL5120C was not performed on phase 2 but was completed on phase 1.

Project was Voids Acceptance, 7,028 tons were placed on a thin lift leveling course (1.5 inches), Project Specials specified the leveling course to be a Pay Factor of 1 for mat density and longitudinal joints, (CP 44, 15 tests completed). Joint cores were not taken, SMM sample (SMITHJP178G082717) used to document 7,028 tons for CP44L, Pay Factor of 1. Flood plain area required 947 tons to be placed. 2- CP44 test were completed in this area. 1,244 tons were placed with a 2 inch mat over a milled surface, 2- CP44's were taken due to small area of placement. A total of 9,219 tons were placed and tested using CP44.

A total of 15,078 tons were placed and tested using CP81 and CP82.

The Asphalt Quality Level report for (42017B1_20856_) Mat Density, 1 compaction test section (CP82) representing 500 ton, 3 processes representing 23797 tons.

- Process 1: representing 947 tons, placed in the flood plain.
- Process 2: representing 15822 tons placed, 2 inch middle mat.
- Process 3: Pay factor of 1 representing 7028 tons placed, 1-1/2" leveling course.

HMA (Grading SX) (75) (PG 64-22) total tons placed 24,297.

Asphalt content tested using CPL5120. CP85 and CP85C not used.

CPL5120C was completed on phase 1.

Item 403-34751 Hot Mix Asphalt (Grading SX) (75) (PG 64-28)**Mix ID: 42017T1_20856_**

Project was Voids Acceptance, 18,478 tons was placed for a 2 inch top mat. CP44, CP85, CP85C were not used do to alternative test methods used. CP81- 36 tests, CP82- 1 test, for a total 37 test completed.

Total tons placed 18,478 on top mat.

Total tons placed on project 42,775, with an incentive of \$134,599.11

CP58- Contractor followed best paving practices. There was not any indication of temperature segregation seen in the mat densities. The mean mat density for bottom mat was a 93.3%. Top mat mean mat density was a 93.6%

Item 601-01000 Concrete Class B: Visual inspection do to small quantity (1.3 CY), material placed in headwall of pipe.

Item 603-10120 12 Inch Corrugated Steel pipe.

Pipe placed under sidewalk with small amount of structure backfill mostly for bedding of pipe. Testing could not be performed due to the small area of placement. Compaction effort was performed by the contractor and Project Engineer accepted visually. See attached picture.

Item 608 00010 Concrete Curb Ramp.

Visual inspection do to small quantities, 37 SY, material placed in curb ramp for sidewalk.

CAR Report Certification Checklist:**Item 216-00101 Soil Retention Blanket**

After numerous requests to the contractor, no documentation was received. Material delivered was inspected and the label on product was found to be on the CDOT APL, Western Excelsior- Excel C5-3 All Natural. Based on the material being an APL product, Project Engineer accepted material. Sample record created in Site Manager to document the product, no attachment on sample record.

Item 601-01000 & 608-00010- Concrete cure

Small quantity used on both of these items, material visually accepted by Project Engineer.

Item 627-00008 and 627-30405 Pavement Marking Materials

Two records completed on each item to reflect white and yellow material

| | | | | |
|--|--|---|-----------------------|----------------------------------|
| COLORADO DEPARTMENT OF TRANSPORTATION | | Contract No. STA0243-087 | Region 4 | Contract ID C20856 |
| Certification Checklist | | Contract Location US 24 B Paso-Eibert CL Paving | Award Date 04/05/2017 | Field Materials Manual Year 2017 |
| | | Contractor SJMON CONTRACTORS | Ad Date 02/23/2017 | |

SMM Report CERT Revision Date: 02/13/2017
 F Refer to Frequency Guide Schedule for further instructions.
 20856-BID US24 EL PASO-ELBERT CL EAST PA Date Printed 5/7/2018

| Project | Item Code | Item Description | Material Unit | Conversion Factor | Total Plan + CO Quantity | Special Instructions | Quantity Reported to Date | Total Installed Quantity | Req'd Number of Certs | Certs Received to Date |
|--------------|-------------|---|---------------|-------------------|--------------------------|----------------------|---------------------------|--------------------------|-----------------------|------------------------|
| Test Method | Sample Type | Rate/Frequency | Line Item No. | Material Unit | Conversion Factor | Special Instructions | Quantity Reported to Date | Total Installed Quantity | Req'd Number of Certs | Certs Received to Date |
| 20856-BID | 208-00002 | Erosion Log Type 1 (12 Inch) | LF | 1.0000 | 500.00 | | 546.00 | 546.00 | 1 | 1 |
| CERT | | Erosion Control, Erosion Log | LF | 1.0000 | | | | | | |
| | | CERT Material Certification | COC | *F | 0036 | | | | 1 | 1 |
| 20856-BID | 212-00006 | Seeding (Native) | ACRE | 1.0000 | 0.15 | | 0.25 | 0.25 | 1 | 1 |
| CERT | | Seed, Native | ACRE | 1.0000 | | | | | | |
| | | CERT Material Certification | COC | *F | 0070 | | | | 1 | 1 |
| 20856-BID | 212-00032 | Soil Conditioning | ACRE | 1.0000 | 0.15 | | 0.25 | 0.25 | 1 | 1 |
| CERT | | Soil Conditioning | ACRE | 1.0000 | | | | | | |
| | | CERT Material Certification | COC | *F | 0075 | | | | 1 | 1 |
| 20856-BID | 216-00101 | Soil Retention Blanket (Straw-Coconut) (Photo degradable) | S Y | 1.0000 | 730.00 | | 1799.00 | 1799.00 | 1 | 1 |
| CERT | | Soil Retention Covering, Blanket | S Y | 1.0000 | | | | | | |
| | | CERT Material Certification | COC | *F | 0080 | | | | 1 | 1 |
| 20856-BID | 403-34741 | Hot Mix Asphalt (Grading S)(75) (PG 64-22) | TON | 1.0000 | 23652.00 | | 24297.43 | 24297.43 | 1 | 1 |
| CERT | | Asphalt Cement, Binder, PG64-22 | TON | 1.0000 | | | | | | |
| | | CERT Material Certification | COC | *F | 0095 | | | | 1 | 1 |
| 712.03.01.00 | | Hydrated Lime | TON | 1.0000 | | | | | | |
| CERT | | CERT Material Certification | CTR | *F | 0095 | | | | 1 | 1 |

| | | | | |
|--|--|--|-----------------------|----------------------------------|
| COLORADO DEPARTMENT OF TRANSPORTATION | | Contract No. STA0243-087 | Region 4 | Contract ID C20856 |
| Independent Assurance Sampling & Testing Checklist | | Contract Location US 24 El Paso-Elbert CL Paving | | |
| | | Contractor SIMON CONTRACTORS | Award Date 04/05/2017 | Field Materials Manual Year 2017 |

SM Report 379 Revision Date 10/06/2017 Production Date Printed 5/7/2018
 ** Refer to Frequency Guide Schedule for further instructions.

| Project | Item Code | Item Description | Material Unit | Conversion Factor | Item Unit | Quantity Reported to Date | Quantity Authorized to Date | Total Installed Quantity |
|-----------|-------------------------------|---|---------------|-------------------|-----------|---------------------------|-----------------------------|--------------------------|
| 20856-BID | US24 EL PASO-ELBERT CLEAST PA | | | | | | | |
| 20856-BID | 403-34741 | Hot Mix Asphalt (Grading SX)(7.6) (PG 64-22) | TON | 1.0000 | | 24,297.43 | 24,297.43 | 24,297.43 |
| | 403.0.2.01.11 | Hot Mix Asphalt (SX)(7.5)(PG64-22) | TON | | | | | |
| | CP44 | CP44 Bulk Sp G & Comp. of HMA Using SSD Specimens | IAT 1/100.00 | | | 3 | 0 | 3 |
| | CP44L | CP44L Bulk Sp G & Comp. of HMA Using SSD Specimens - Long | IAT 1/100.00 | | | 3 | 0 | 3 |
| | CP48aa | CP48aa-Voids in the Mineral Aggregate (VMA) | IAT 1/100.00 | | | 3 | 0 | 3 |
| | CP51 | CP51 Maximum Specific Gravity of HMA | IAT 1/100.00 | | | 3 | 0 | 3 |
| | CPL5106 | CPL5106 Res. to Deformation of Bitum. Mixtures; Hveem | IAT 1/100.00 | | | 3 | 0 | 3 |
| | CPL5115 | CPL5115 Dens. of Bitum. Mix. Specimens Compacted by the SDC | IAT 1/100.00 | | | 3 | 0 | 3 |

Addendum 1

1.0 Asphalt Quality Level Report

Introduction:

The Quality Level Report will be used to replace both the Voids03 and the Asphalt03 programs. The report will generate by choosing the contract in CAR by clicking the “+” in front of the Contract ID, then choose either the Item Code or the report type of Interim or Final. It will be possible to run versions of the report in three ways:

- Item Code – shows the quality level, incentive or disincentive, for each asphalt item on the project.
- Interim – shows a preliminary report without checking for element totals to ensure the tons for each element match and will have all asphalt items in the report.
- Final – shows the final report and will check the element totals to ensure they match.

Like other CAR reports the data is pulled from SiteManager once the report title is clicked in the Trns*port folder. Error checking is included in the report to help show what data is missing. This may include not having a Quantity, Control Type, Control Number, Design Type, Mix ID or having incomplete data in a test template, etc.

Maintain Sample Information Window:

The report pulls data for all Quality Acceptance Testing samples on a project that have a 403.02.xx.xx material code. The following are also critical fields used by the report that must be correctly populated in SiteManager:

| Basic Sample Data | | Addtl Sample Data | Contract | Other | Tests |
|-------------------|---------------------------------|-------------------|--------------------------|-----------------------|----------------------|
| Smpl ID: | GOODSELM1655125717 | Status: | Complete | | |
| Revised By: | | Revising: | | Sample Date: | 05/04/16 |
| Link To: | | Link From: | | Log Date: | 05/05/16 |
| Smpl Type: | Quality Acceptance Testing | Acpt Meth: | Sample and Test | | |
| Material: | 403.02.01.08 | | Hot Mix Asphalt (SX)(75) | | |
| Sampler: | ROOTR | | Richard Root, R3 | | |
| P/S: | United Companies Of Mesa County | | GEN100042 | | |
| Type: | General | City: | Grand Junction | | |
| Prod Nm: | | | | | |
| Mnfr: | United Companies Of Mesa County | | GEN100042 | | |
| Town: | | Geog Area: | Spaces | | |
| Intd Use: | | | | | |
| Repr Qty: | 1,000.000 | Ton | | Lab Control Number: | CNGOODSELM1655125717 |
| Auth By: | GOODSELM | Auth Date: | 05/11/16 | Lab Reference Number: | AC1 |

Sample Date: This field will default to the date the sample was created; however, it can be changed to any time before the sample creation date. **All samples should be created in the order they were obtained and tested.**

Smpl Type: The Quality Level Report picks up samples with a sample type of Quality Acceptance Testing and an Acpt Meth of Sample and Test.

Repr Qty: This field is used to calculate the quantity represented by the sample being entered. When populated to the report these quantities will be used for each process / mix design to obtain a total quantity for the element.

Process Type: This field is used to record what type of paving is being performed. Whether it be a normal Process, a Process Test Section (CTS or DCS) or a Pay Factor of 1 for Mat Density. A process is a group of like samples that are grouped together, a detailed definition can be found in Section 105.05 of the CDOT Standard Specification for Road and Bridge Construction. There are three types of processes that the report uses:

- **Process Test Section:** Using the CP 82 template from SiteManager which can use either 3 cores (Demonstration Control Strip) or 7 cores (Compaction Test Section). The percent compaction will be obtained from the Core % Compaction fields on the template. Nuclear density tests may or may not be used for this type of process.
- **Pay Factor of 1:** This process is used when the pay factor for the element should be set to one. This option should be chosen with paving a leveling course, a bond breaker, roller pass study, or for the Furnish Asphalt item.
- **Process:** This process will be used for day to day paving operations.

Cntrl Number: This field will identify the number of the process. There may be several different processes on a project which will require different combinations of processes and control numbers. For example, you may have Process Type: Process with Cntrl Number: 1 for a 4" bottom lift and a Process Type: Process with a Cntrl Number: 2 for a 2" top lift. There may be several test sections on a project and each should have a unique Cntrl Number.

Design Type: This field will be SUPERPAVE for asphalt paving.

Mix ID: This field is populated with the mix design that represents the material being tested. The mix design must also be approved for your project and the proper association made in SiteManager by the Region Lab Manager.

Material Test Templates:

The type of acceptance is determined automatically from the mix design in SiteManager and it can be voids acceptance or gradation acceptance. The material test templates used by the report are summarized in the tables below.

Voids Acceptance:

| | |
|-------------------------|-----------------|
| Compaction Test Section | CP82 |
| Joint Density | CP44L |
| AC Content | CPL5120 or CP85 |
| Voids | CPL5115 |
| VMA | CP48 |
| Mat Density | CP44 or CP81 |

Gradation Acceptance:

| | |
|---|-----------------|
| Mat Density | CP44 or CP81 |
| Joint Density | CP44L |
| AC Content | CPL5120 or CP85 |
| Gradation | CP31HMA |
| Compaction Test Section / Demonstration Control Strip | CP82 |

Binder Paid Separately:

When binder is paid for separately from HMA the **ACCOST template will need to be completed for each Item Code/Mix ID combination** that is used on the project. There are two fields on the ACCOST template; The Bid Item # should indicate the 411 Item Code for the binder that is used in the asphalt mix and also listed on the CAR report Owner Acceptance Sampling Checklist. The price per ton of the 411 item will also be entered into the ACCOST template in the AC Cost field. These two pieces of data are used to connect the 403 HMA item to the 411 item which the report will use to calculate the Total Cost/ton of HMA. The ACCOST template shall be completed before any other tests for each HMA item.

Enter Test Results
Test Data

ACCOST
Document AC Cost per Ton of HMA

In Spec
 Out of Spec
 No Spec

Print

Bid Item #:
AC Cost:

Remarks:

CAR Quality Level Report:

The first page of the report will display any error messages that indicate errors that need to be fixed in SiteManager. The report can be generated at any point during the project to get an indication of the moving quality level. The report is broken into the various elements that are used to make up the incentive / disincentive for each Item Code/Mix Design with a summary for each process at the bottom of the element.

The elements that make up the report are:

- Asphalt Content
- Compaction Test Section
- Mat Density
- Gradation
- Air Voids
- Voids in Mineral Aggregate (VMA)
- Joint Density

Elements included in the report are based on whether the mix design is determined to be voids or gradation. There is an Interim or Final Report and a signature block for the tester and cross checker. Each element has a header which includes Item Code, Material Code, Mix Id, HMA Cost/ton, etc. There is also a secondary header to indicate spec limits and W and V factors. After each element there is an indication of the processes that are included and an element summary.

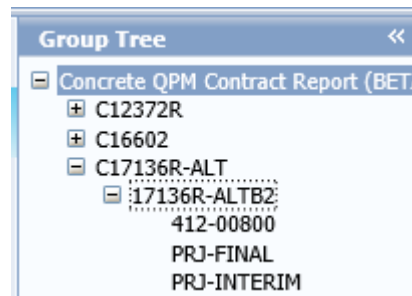
At the end of each item section there is a summary for each mix design and then a final summary at the end of the report for comparison of the element totals and a list of the total incentive / disincentive by mix design.

Addendum 2

1.0 Concrete Quality Level Report

Introduction:

Standard Specifications for Road and Bridge construction sections 105.06, 106.06 and 412 contain the specifications for concrete paving. The Concrete03 program is replaced by the Quality Level Report. The report will generate by choosing the contract and project in CAR. It will be possible to run different versions of the report by using the expand (+) and collapse (-) icons



- Item Code – shows the quality level, incentive or disincentive, for each concrete item on the project.
- Interim – shows a preliminary report without checking for element totals or sample completion to ensure the square yards for each element match.
- Final – final report will check the element totals to ensure they match.

Like other CAR reports the data is pulled from SiteManager once the report title is clicked in the Trns*port folder. Error checking is included on the first page of the report to show what data is missing or incorrect. This may include a blank Control Type, Control Number or having incomplete data in a test template, etc.

Maintain Sample Information Window:

The report pulls data for all Quality Acceptance Testing samples on a project that has 412 and 601 material codes. The following are critical fields used by the report that must be correctly populated in SiteManager:

Basic Sample Data tab:

Sample Date: Defaulted to sample creation date and can be changed to any time before the sample Log Date. Sample creation should be completed in the order they are obtained and tested so they appear in the correct order on the report.

Smpl Type: The Quality Level Report uses samples with a type of Quality Acceptance Testing and an Acpt Meth of Sample and Test.

Material: The material codes used for concrete paving will begin with either 412 (Thickness) or 601 (Strength), refer to the OA Sampling and Testing Checklist for the exact code.

Repr Qty: This is the quantity to be represented by the tests that will be assigned to the record. The total quantity for the element will be obtained by adding the Repr Qty's from each sample.

| Maintain Sample Information | | | | |
|--------------------------------|--|--|-------|-------|
| Basic Sample Data | Addtl Sample Data | Contract | Other | Tests |
| Smpl ID: SEMUSD1586094653 | Buy American: <input type="checkbox"/> Spaces | | | |
| Reqst By: PROJECT | | Witnessed By: SEMUSD | | |
| Smpl Size: 1 Lot | | | | |
| Dist from Grade: Spaces | | | | |
| Station: 277+50 | Offset: | Reference: | | |
| Smpld From: GRADE | | | | |
| Smpl Origin: | | | | |
| Control Type: PROCESS | Cntrl Number: 1 | Seal Number: | | |
| Design Type: PCC | Mix ID: 2015081R | | | |
| Plant ID: | | Plant Type: Spaces | | |
| Creator User ID: SEMUSD | Include Standard Remarks: <input type="checkbox"/> | Sample Created from DWR <input type="checkbox"/> | | |
| Last Modified User ID: MAYHEWT | Last Modified Date: 03/25/16 | DWR Date: 00/00/00 | | |
| | | DWR Inspector: | | |

Addtl Sample Data tab:

Control Type: Process is the only entry allowed for concrete. See section 105.06 (a) for process changes

Cntrl Number: This field will identify the number of the process. Different combinations of processes and control numbers may be required on a project. For example, a Control Type of **Process** with Cntrl Number of 1 for 6-inch concrete pavement and a Control Type of **Process** with a Cntrl Number of 2 for 8-inch concrete pavement. For the pavement thickness element a new mix design is not a reason to create a new process as per 105.06 (a) of the Standard Specifications

Design Type: This field will be **PCC** for concrete paving.

Mix ID: Complete this cell with the mix design that represents the material tested. HQ Concrete Unit must approve the mix design for the project and the proper association between the mix design and project made in SiteManager. **This is the mix design number shown on the CDOT Form 1373.**

Note: For the Thickness element, do not enter a mix design on the sample record, as the cores are associated to the 412 paving element and not the 601 concrete element. Mix designs are only associated to 601 concrete elements.

| Contract ID | Project | Line Item | Proposal Line Number | Item Code | Line Item Desc | Fed State Prj Nbr |
|-------------|--------------|-----------|----------------------|-----------|-----------------------------|-------------------|
| C17136R-ALT | 17136R-ALTB2 | 0220 | 0725 | 412-00800 | *Concrete Pavement (8 Inch) | STA 0142-051 |

Contract Tab:

On the Contract Tab choose the appropriate contract and line item that is associated to the sample. There can only be one.

Material Test Templates:

Automatic determination of the type of acceptance uses the presence or absence of the T97-28 and T97-QC templates.

Compressive Strength Acceptance:

| | |
|----------------------|------------------|
| Thickness | T148 |
| Compressive Strength | C39-28 or T24-28 |

Flexural Strength Acceptance:

| | |
|----------------------|-------------------|
| Thickness | T148 |
| Flexural Strength QA | T97-28 |
| Flexural Strength QC | T97-QCaa and C496 |

Note: Canceled tests and voided samples will not be included in the report.

CAR Quality Level Report:

The report will be accessible in CAR and there will be an interim and final report which can be viewed by expanding the group tree by clicking the +. Reports can be exported to a PDF and saved or printed using the "Export this Report" icon.

The first page of the report will display any error messages that indicate missing or conflicting issues that are required to be corrected in SiteManager and the report can be generated at any point during the project to get an indication of the moving quality level. The report is broken into the various elements that

are used to make up the incentive/disincentive for each Item Code/Mix Design with a summary for each process at the bottom of the element. The elements that make up the report are:

- Thickness
- Compressive Strength
- F & t Test Comparison
- Flexural Strength

Elements are included in the report based on the presence of the C39-28 or the T97-28/T97-QC templates as well as the F & t Comparison made between the T97-28 and T97-QC

At the end of each item section there is a summary for each mix design and a final summary at the end of the report for comparison of the element totals and a list of the total incentive/disincentive.

Thickness

The thickness section of the report will use the T148 data and will obtain both the thickness test result and the plan thickness from this template. There will be a warning message at the bottom of the element to indicate if a result is lower than the lower tolerance limit. If a test result is more than 1 inch below the lower tolerance limit it will be but in a separate process. I/DP will not be calculated on that test as this is a remove and replace situation.

Compressive Strength

The compressive strength section of the report will use the C39-28 or the T24-28 template. There will be a warning message on the report if a test value is less than the lower tolerance limit. There is not a specification for 2 x V out of tolerance or removal and replacement for concrete paving. If a test is below the lower tolerance limit and the contractor chooses to core the area, a T24-28 template will need to be added to the same sample ID that contained the C39-28 test.

Handling Failures or Low Test results

Thickness:

- If a core is lower than the Plan Thickness by more than 0.4-inch but not more than 1 inch, obtain an additional core, if that core is greater than Lower Tolerance (TL) no action is necessary. Document additional core results in SMM as Information Only.
- If the additional core or any randomly selected core is less than Lower Tolerance Limit (TL) but greater than Plan Thickness (PT) minus 1-inch, the area represented by this core shall become a separate process and this core will not be used to compute an I/DP. The Quality Level Report will remove this test from the element automatically and create a separate process called LOW-X. Obtain four additional randomly selected cores within the area represented by this core. The four additional cores will be used to compute an I/DP in accordance with Section 105. Cores taken at locations not randomly determined, such as process control cores will not be used to compute I/DP.
 - Create **four additional QA samples** for the additional cores; assign the same, unique, process number to the samples, this process number is different from the original sample. The represented quantity on each Sample ID of the four additional cores taken, should total the area represented.
 - Cancel/Void the original test/sample.
- When the measurement of any core is less than PT minus 1.0 inch, whether randomly located or not, the area represented by this core shall become a separate process and this core will not be used to compute an I/DP. This is a remove and replace situation. The actual thickness of the pavement in this area will be determined by taking exploratory cores. Cores shall be taken at intervals of 15 feet or less, parallel to the centerline in each direction from the affected location until two consecutive cores are found in each direction which are not less than PT minus 1.0-inch.

- Obtain exploratory cores to define the out of specification area, document additional core results in SMM as Information Only.
- Once the removal and replacement is complete, create **four additional QA samples** for the four additional cores that represent that area. Assign the same unique process number to the samples, which is different from the original sample. The represented quantity of the four cores should total the area represented.

Compressive Strength:

- The higher value between the C39-28 and the T24-28 shall be used when compressive strength is less than TL (4500psi) and the contractor take additional cores (T24).
- Add the T24-28 to the same sample ID that contains the original C39-28. This can be done using the Maintain Test Queue in LIMS.
- Both tests are left as valid tests and the report will choose the higher value for the I/DP calculations.

Flexural Strength:

- When flexural strength is less than 650 psi, the contractor may take cores for split tensile testing (C496). The higher value between the T97-QC and C496 shall be used. The C496 template includes a field for the correlated flexural strength as per CP65. This correlation will be figured outside of SMM/LIMS and manually entered into the template. Only the contractors QC results can be replaced with a C496 (Splitting Tensile).
 - Add the C496 test to the original sample that contains the low T97-QC. This can be done using the Maintain Test Queue in LIMS.
 - Both tests are left as valid tests and the report will choose the higher value for the I/DP Calculations

Partial list of error or informational messages that appear on the first page of the report:

A sample ID with two of the same valid tests. (I.e. two T148 tests on the sample sample)
 Specification Height on T148 template is null or zero
 Average Core Inch Height cell is null or zero on T148
 Sample with zero (0) Rep. Qty.
 Valid sample created with valid control type and null (blank) control number
 Total quantities do not match among element totals (final only)
 Not all samples are complete (final only)
 Compressive and Flexural samples the Mix ID is blank
 If there is more than one Item on the Contract tab

Messages included below the element:

C39-28 value is below Plan Value
 T148 value below Plan Value by more than 1 inch
 T148 value below Plan Value by more than .4" but not more than 1 inch
 T148 value is more than 1 inch above plan value
 Element message for a T148 Value below Plan Value but above TL
 Test data that is > 1 inch above Plan Value

Addendum 3

Asphalt Quality Level Report

Department of Transportation

State of Colorado

Report Date: 5/7/2018

Contract ID: C20856

Project Number: 20856-BID

Region No: 4

Fed/State Project #: STA0243-087

Ad Date: 20170323

Acceptance Type: Void Acceptance

Location: US 24 El Paso-Elbert CL Paving

Item Code: 403-34741

Material Code: 403.02.01.11

Mix ID: 42017B1_20856_

Design Type: SX

P/S: Simon Contractors

Gyrations: 75

Total Cost/ton: \$72.00

HMA Cost/ton: \$72.00

AC Cost/ton: \$0.00





















(*** FINAL REPORT ***)

Asphalt Content

Upper Test Limit: 6.00
Lower Test Limit: 5.40
Design Sp Gr: 2.424
V Factor: 0.2
W Factor: 10

| Test Date | Sample ID | Test Quantity | Total Quantity | Max Sp Gr | % AC | MQL |
|---------------|-------------------|---------------|----------------|-----------|------|-----|
| 1 07/25/2017 | ELLISB177P075534 | 1000 | 1000 | 2.439 | 5.42 | |
| 2 07/25/2017 | ELLISB177P102740 | 1000 | 2000 | 2.426 | 5.69 | |
| 3 07/26/2017 | ELLISB177Q092930 | 1000 | 3000 | 2.438 | 5.68 | 100 |
| 4 07/26/2017 | GONSERS177V073643 | 1000 | 4000 | 2.446 | 5.51 | 94 |
| 5 07/28/2017 | ELLISB177S112718 | 1000 | 5000 | 2.425 | 5.61 | 98 |
| 6 07/28/2017 | ELLISB177S144315 | 1000 | 6000 | 2.420 | 5.68 | 100 |
| 7 07/31/2017 | ELLISB177V104002 | 1000 | 7000 | 2.429 | 5.59 | 100 |
| 8 08/01/2017 | ELLISB1781112006 | 1000 | 8000 | 2.430 | 5.53 | 100 |
| 9 08/01/2017 | ELLISB1781184212 | 1000 | 9000 | 2.428 | 5.74 | 100 |
| 10 08/02/2017 | ELLISB1782103724 | 1000 | 10000 | 2.424 | 5.73 | 100 |
| 11 08/02/2017 | ELLISB1782121632 | 1000 | 11000 | 2.427 | 5.78 | 100 |
| 12 08/02/2017 | ELLISB1782150453 | 1000 | 12000 | 2.430 | 5.65 | 100 |
| 13 08/04/2017 | ELLISB1784122100 | 1000 | 13000 | 2.420 | 5.95 | 100 |
| 14 08/04/2017 | ELLISB1784123036 | 1000 | 14000 | 2.427 | 5.87 | 100 |
| 15 08/04/2017 | ELLISB1784161309 | 1000 | 15000 | 2.424 | 5.69 | 99 |
| 16 08/09/2017 | ELLISB1789161743 | 1000 | 16000 | 2.433 | 5.70 | 100 |
| 17 08/11/2017 | ELLISB178B084245 | 1000 | 17000 | 2.434 | 5.68 | 100 |
| 18 08/11/2017 | ELLISB178B130304 | 1000 | 18000 | 2.427 | 5.61 | 100 |
| 19 08/11/2017 | ELLISB178B163659 | 1000 | 19000 | 2.435 | 5.73 | 100 |
| 20 08/12/2017 | ELLISB178C145905 | 1000 | 20000 | 2.441 | 5.43 | 100 |
| 21 08/12/2017 | ELLISB178C172546 | 1000 | 21000 | 2.428 | 5.48 | 95 |
| 22 08/14/2017 | ELLISB178E140506 | 1000 | 22000 | 2.442 | 5.47 | 88 |
| 23 08/14/2017 | ELLISB178E154629 | 1000 | 23000 | 2.427 | 5.61 | 88 |
| 24 08/15/2017 | ELLISB178F100503 | 1000 | 24000 | 2.434 | 5.43 | 87 |
| 25 08/15/2017 | ELLISB178F115131 | 297 | 24297 | 2.435 | 5.60 | 95 |

| Certification Checklist Requirements | | | | | | |
|--|---|------------------------------|--|-----------------------|----------------------|--|
| Dated submitted to PE & Contractor: | | | August 1, 2018 | | | Page 1 of 3 |
| ITEM Number | Type of Document Required COC or CTR | APL or QML Material Required | Requires Contractor APL/QML Verification YES/NO | Date COC/CTR Received | Accepted or Rejected | Notes |
| 206-00360 Mech Reinforcement | COC | NY-APL for geotex | YES | 08/17/18 | Accepted | |
| 207-00205 Top Soil | CTR | NO | NO | 05/25/18 | Rejected | Missing stamp and signature |
| 208-00009 Erosion Logs Typ 2 | COC | YES-APL | YES | 04/05/18 | Rejected | Missing stamp & signature |
| 208-00020 Silt Fence | COC | NO | NO | 06/05/18 | Accepted | |
| 208-00051 Storm Drain Inlet Protection | COC | YES-APL | YES | | | |
| 210 Modify Manhole | COC | Precast-YES QML | YES | | | Poured in place-does not require verification letter |
| 212-00006 Seeding | COC | NO | NO | | | |
| 212-00032 Soil Conditioning | COC | NO | NO | | | |
| 213-00003 Mulching Weed Free HAY | COC | NO | NO | | | |
| 213-00012 Mulch Tackifier | COC | NO | NO | | | |

-  COC-CTRs
-  Emails and misc. docs
-  Final Documents
-  Item 203 CIP
-  Item 206 CL 1 and 2
-  Item 206 Filter Material CL A and C
-  Item 304 ABC Class 6
-  Item 403 S(100) PG64-22
-  Item 411 Binder
-  Item 412 8.5 inch
-  Item 412 10 inch
-  Item 412 Mix Designs
-  Item 503 Caissons
-  Item 601 CL D Bridge
-  Item 601 CL D Wall
-  Item 601 Class D concrete
-  Item 603 RCP-all sizes
-  Item 608 Sidewalk
-  Item 609 Curb and Gutter all types
-  Item 624 Pipe all classes