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PROJECT COMPLETION

When all work is completed on a project, the Department begins a process to reconcile the project records. The records are collected, the pay item quantities are checked, the documentation is reviewed, and a final estimate and other final documents are prepared. The "final" is a summary of project records including pay item quantities, costs and other data relating to the performance of work on the project. The engineer must compile the final documents and records in accordance with this manual, the Field Sampling and Testing Manual and the Construction Automated Records System (CARS).

Semi-Final Estimate

A semi-final estimate may be created when the Contractor has completed more than 90 percent of the work and has met the requirements of 109.04 C. The retainage on the semi-final estimate may be reduced to not less than 1 and not more than 2 percent of the estimated total work done to date.

When the Engineer determines that the Contractor has completed 100 percent of the original work not including contract revisions, and the Contractor has met all of the conditions listed in 109.04 C., the Engineer may prepare additional semi-final estimates.

Final Inspection

A final inspection will be requested by the contractor and conducted for each project. Before final inspection, the highway, borrow pits and all areas occupied by the contractor in connection with the work will be cleaned of all rubbish, excess materials, temporary structures and equipment in accordance with Specification 105.15.

These parties should be invited to the final inspection:

1. The Engineer
2. The Contractor
3. The owner (DOT, City, or County or their authorized representative)

If the inspection discloses any unsatisfactory work, the contractor will be given the necessary instructions in writing (or email) for correcting the work. Another inspection is requested by the Contractor after the corrections have been completed.

Project Acceptance

After a satisfactory final inspection, the contractor will be notified of the date the field work on the project was inspected and accepted in accordance with Specification 105.15 C. The owner or authorized representative will notify the contractor ([example](#)) with copies to the district office. This final acceptance letter should have no stipulations or conditions of acceptance and is to be written immediately after work is inspected and accepted.

A copy of this letter should be uploaded to the Final Checklist.

Create Final Acceptance Letter in CARS.

It is possible to create the final acceptance letter template in CARS. This template can be modified by the Engineer as needed.

1. On the Main Menu, click on the Final Acceptance Letter link. The Final Acceptance Letter page is displayed.
2. Enter the date the project was inspected and the project owner in the text boxes provided.
3. Click on the Submit button. A file download dialog box will appear and you have the option of opening the file or saving it to your computer.
 - a. Picking the Save option will open the Save As dialog box on your computer allowing you to save the file at a location of your choice.
 - b. Picking the Open option will generate the letter in a Word document. The date completed and the acceptance date will be filled. You will also have the option of editing and saving the letter.

FINAL PAPERWORK

Final Checklist

Upon completion of project work, the Project Engineer should use the Final Checklist in CARS to report the status of the project final. The top portion has basic information about the project such as the prime contractor, the original contract amount, the final contract amount, the start and completion dates. The Project Engineer will be required to fill in the text boxes provided for owner, the percent of the final process completed and the tentative final submission date.

The Remarks section should be used to note what work remains before the final can be submitted such as checking quantities or missing documents. This portion of the Final Checklist enables Construction Services to schedule workloads and relay information to the contractor regarding status of the project final. It is also imported into the Finals Tracking Report which is provided monthly to the Districts and Executive Office.

The second half of the Final Checklist Maintenance page contains a list of items commonly submitted with a final along with check boxes. The Project Engineer should use the list to keep track of these items when preparing the final records.

The Project Engineer should use the browse button at the bottom of the page to upload required documents as they are completed. Once the file has been selected, use the drop-down menu to select the corresponding title and click save.

Submission of Final Records

When the project is accepted, all project records and documents are gathered for submission of the final. The Project Engineer will inform the contractor of any missing documentation (pit releases, receipts of payments, certifications, etc.) that must be submitted before final payment is made.

Pay Quantities

1. All quantities must be entered in Quantity Manager and reference must be made to the source documentation.
2. All necessary measurements and calculations are shown on the source document and paid according to the plans and specifications.
3. All computations on the source documents should be checked for accuracy.

Final Estimate

Once all quantities have been checked and all required project documents have been collected, the Project Engineer prepares and approves the final estimate.

Project Engineer's Report on Materials Acceptance (SFN 10110)

All bid items used on the project will be listed on [SFN 10110](#) by contract bid item in spec and code order. The appropriate approval numbers for certifications, shop drawings, testing, etc. are filled in by the Engineer. Some bid items will have more than one approval type.

Upload the completed report to the CARS Final Checklist.

Notify the District Materials Coordinator that the report has been completed so they can proceed with creating the Combined Materials and Project Acceptance Letter ([example](#)).

Contract Time for Completion SFN 5660

This form is used to show the time used to complete the contract by working days, calendar days, completion date or completion date with guaranteed working days. The lower portion is designed to show days charged when there are liquidated damages assessed on working day or completion date with guaranteed working day contracts.

The completed Contract Time for Completion is uploaded to the Final Checklist.

Project Narrative Report

The project narrative report is used to summarize the work on the project and, more importantly, to suggest improvements for future projects. This report is reviewed by several divisions throughout the NDDOT.

There is a link to the Project Narrative Template on the CARS Main Menu, in the same area of 'Maintenance' as the other finals-related links. Clicking the 'Project Narrative Report' link will open the file as a Word document which can be saved on your computer. CARS will auto populate several of the project-related fields at the top of the report. The fields can be edited as needed.

The Engineer does not have to wait until the end of the project to complete this report, the report can be saved on your computer and filled out with suggestions throughout the life of the project as ideas arise. When completed, upload the file within the Finals Checklist module in CARS.

The narrative is not required on county projects, seal coat projects, thin lift overlay projects, or contract patching projects.

Statement of Materials Taken from Pits SFN 10061

The Statement of Materials Taken from Pits, [SFN 10061](#), is used to inform the Materials Division of the material quantities removed from pits and used on a project.

- Quantities from all pits used to produce material for the project must be listed on the form. This includes aggregate pits and borrow pits.
- All materials taken from pits should be listed separately by bid item.
- Aggregates used in bituminous pavements will be calculated by subtracting the tons of oil used from the total mix tonnage.
- Do not record materials taken from Concrete Ready-Mix Plants on the Statement of Materials form.

Check the applicable box indicating whether the material was taken from a state owned, state optioned, private or commercial pit. A commercial pit is defined as one where material is sold on a regular basis, not just for the time of the project.

The completed form is submitted in CARS within the Finals Checklist.

Summary of Aggregate Quality Tests SFN 10072

A summary is submitted on [SFN 10072](#) for each type of aggregate used on the project and includes test results of all field samples, project record samples and those samples tested in the Central Lab. One copy is submitted to the District Materials Coordinator and the other copy is filed in the materials file with the individual test results for the type of aggregate.

Explanation of Change in Plan

All quantities that overrun or underrun the original contract amount by 5% AND \$10,000 will be explained. CARS assembles all contract items that meet these criteria and displays them in the Explanation of Change in Plan report. To use this list, you will have to copy and paste it into a Word document.

1. Place the mouse pointer directly above the project number on the Explanation of Change in Plan list.
2. Hold down the left mouse button and drag it to the end of the list of contract bid items.
3. When all the items are highlighted, click on the right mouse button and click on the copy command.
4. Open a blank Word document. Paste the Explanation of Change in Plan into the blank document.
5. The list appears in a table format with space under each bid item to type the explanation of change. The lines of the table are hidden and will not show when the Explanation of Change in Plan list is printed.
6. The list also indicates if an explanation was included on the original change order. If so, you will not have to make further explanation of change order items.

Haul Road Release SFN 14458

The contractor is responsible for maintaining public roads and streets used as haul roads during project construction. When hauling is complete, the contractor will leave the haul roads in as good a condition

as they were before hauling began. Standard Specification 107.08 describes the responsibilities and payment for haul road restoration.

The condition of the haul road should be well documented in the pre-haul inspection. The Project Engineer will communicate with the county or township officials before making a final decision about what restoration will be performed.

The haul road restoration should be performed by the contractor as specified in the contract and the haul road release should be obtained as soon as possible. The Haul Road Release must be signed by an authorized representative of the county or township where the haul road is located.

The contractor will submit the haul road releases on [SFN 14458](#) to the Project Engineer. The release will be submitted as part of the final records. If no haul roads were used, it should be noted in the transmittal letter submitted with the final records.

Pit Release Statement and Receipt of Payment for Materials SFN 14486

The pit release and receipt of payment, [SFN 14486](#), shows that payment has been made to a pit owner and that the contractor has restored the pit area to the satisfaction of the pit owner. Proof of payment and the release from the owner are part of the requirements for reduction of retainage on the semi-final progressive estimate. The form must be signed and witnessed for the release section and also for the receipt section.

The pit release/receipt of payment is required for state owned, state optioned and privately owned pits. The following procedure is generally followed.

1. After all material has been removed from a pit, the Project Engineer will check the pit quantities. The Project Engineer will notify the landowner and the contractor in writing of the quantities removed from the pit. The total amount removed from the pit will include any quantities for waste, private use, etc. Copies of the letter are sent to the Materials Division. The Project Engineer may partially fill out the pit release/receipt before mailing it to the contractor which ensures the correct form and quantities are used. It is the contractor's responsibility to complete and return the form.
2. A separate pit release/receipt is required for each pit except when material is supplied by a commercial supplier. A pit release/receipt is not required for a commercial pit. The pit release/receipt must be dated, signed by the pit owner or legal representative and witnessed.
3. State option pit - Special instructions regarding conditions of the pit option maybe shown on the pit plat and should be checked to ensure the contractor has fulfilled the requirements of the option.
4. State owned pit - shall be left in a condition satisfactory to the district engineer. The district engineer is responsible for signing the pit release/receipt for the Department.

The pit release/receipt forms will be submitted with the final records.

TERO Proof of Payment

When a portion or all of the project limits are within an Indian reservation, the Tribal Employment Rights Ordinance (TERO) Requirements special provision may be part of the contract documents. Part of the TERO special provision provides a fee to be paid to the Tribal Authority. The contractor will provide the

Project Engineer with documentation from the proper tribal authority that the TERO payments have been made before final acceptance of the project.

As Built Plans

The Project Engineer will keep an accurate list of construction changes for the development of as-built plan sheets. The as-built plan sheets will be used to update the original master plan sheets and roadway information databases such as Highway Components and RIMS Inventory.

Local Agency project as-builts are not required.

All As-builts (with changes or without) must be uploaded to FileNet using the CARS Finals Checklist or District employees can add them directly to FileNet and indicate that on the final checklist. There are two upload options in the Finals Checklist. The two upload options are:

- a. Full As-Built Plan Set – Minor
 - i. These projects are defined as preventative maintenance projects.
- b. Full As-Built Plan Set – Major
 - i. This option should be used for New Construction, Reconstruction, and Rehab projects.

CARS is set up this way because 'Minor' and 'Major' as-builts are saved to FileNet with different retention periods.

Additional Guidance:

1. Include all Work Drawings in As-built plans
2. As-builts can be hand drawn and scanned to pdf or created electronically. If as-built plans are created electronically, see the NDDOT CADD Standards Manual for recommended procedures.
3. Any plan sheet changes created by change order must be included in the as- built plans.

The following is a list of changes to be noted and revised by the Project Engineer in the as-built plans. This list is not intended to be inclusive. Anything that could ultimately have an effect on a future project should be included in the as-builts.

1. Changes to the beginning and ending project stations should be noted on the title sheet. Also document station changes to skip or exception areas such as bridges.
2. Changes to horizontal and vertical alignments (profile/grade).
 - a. Ties to reference points pertaining to horizontal alignment.
 - b. Changes in horizontal alignments should be redrawn.
 - c. Changes in profiles are not typically redrawn. The changes in the design vertical curve table are struck out and the actual curve information is written next to the table.
 - d. Changes in ditch grades should be documented similar to roadway profiles.
3. Changes to typical sections including base or surfacing thickness, width of lanes and shoulders, super elevation, in-slope, etc.
4. Changes to topographical features such as:
 - a. Pavement tapers and transitions.
 - b. Driveway locations and sizes.
 - c. Sidewalk width and location.
 - d. Curb size and location.
 - e. Fencing.
 - f. Striping and pavement marking.

- g. Location, length, etc. of safety appurtenances and shoulder rumble strips.
- h. Location of signal and lighting standards.
- 5. Changes to the location, elevation or size of pipes and drainage structures.
- 6. Changes to soil conditions such as: Locations and depth of subcuts Geotextile fabric.
- 7. Changes to right-of-way and borrow easement.
- 8. Changes to the location, elevations, dimensions, etc. of box culverts and bridges.
- 9. Changes to permanent bench marks.
- 10. Changes in removal items.
- 11. Changes in the placement of trees, shrubs, planters, and retaining walls.

Changes to cross sections are not required in the as-built plans. If the project owner is the NDDOT, the electronic files used to calculate final earthwork quantities must be saved in the project as-built folder on the Central Office CADD server (R: drive). If earthwork was calculated from cross sections, the working cross section drawing, earthwork input file or project manager run, and the earthwork log file must be included. If earthwork was calculated directly from a DTM, the as-built TIN file and the drawing that shows the clip boundaries and earthwork reports must be included.

Changes to the following sheets are not typically documented in an as-built set of plans:

- 1. Changes do not need to be made on the quantity sheets
- 2. Temporary items such as construction signing, detours and bypasses are not required

Test Hole Pit Plat Records

When gravel pits with pit plats are used on a project, the pit plat shall be updated to indicate areas of the pit that have been mined. The areas used shall be marked with cross hatching and the quantity used documented. Copies of the plats will also be sent to the Materials and Research Division.

Project Files and Books

As stated in Section 1 & 2 of this manual, the majority of project records are now maintained in CARS/Filenet. Any project records not maintained electronically must be submitted to Construction Services Division. This includes:

- 1. Materials Documents, if not uploaded into CARS Materials Dropbox
- 2. All field books used to document and measure quantities

Transmittal Letter

An email or letter must be sent to Construction Services Division which notifies the Records Section that that project is ready for review. Any missing documents should be listed along with measures taken to obtain them.

Include a statement “All records are electronic, there will be no hard copies submitted”, if applicable. If hard copies are submitted,

FINAL RECORD REVIEW

District Review

All final records and documents are submitted to the district office for review. The district will review all records and documents for accuracy and that they conform to accepted procedures.

When the district is satisfied that all records and documents comply with all DOT policies and procedures, the district engineer will approve the final estimate and write the Combined Project/Materials Acceptance Letter to the Construction Engineer.

A copy of the combined letter is entered into the Final Checklist in CARS. Copies will also be sent to:

1. DOT - Construction Services
2. DOT - Materials & Research
3. Political Subdivision
4. Project Engineer
5. District Materials Coordinator

Review by Construction Services

Notify Construction Services after the district review is complete. Construction Services will conduct a final review. Most, if not all, final records should now be in CARS/Filenet. Any remaining physical documents should be sent to Construction Services.

The Records Section will review records for accuracy and conformance to accepted policies and procedures. When checking is complete, a final checklist and memo listing any discrepancies found, missing documents, etc., will be sent to the Project Engineer with a copy sent to the district engineer.

For projects with no missing records, documents or other unresolved issues, the following will be sent to the contractor:

1. A copy of the final estimate
2. A stamped copy of the final voucher for the contractor's signature

After the contractor signs and returns the final voucher, it will be forwarded to Finance and final payment will be made.

For projects that have missing records or documents or have other unresolved issues the following will be sent to the contractor:

1. A copy of the final estimate
2. A letter listing missing items

For projects where the contractor disputes quantities, liquidated damages, payments for extra work, materials failure deductions, etc., the final estimate should be complete and will reflect the owner's position for these items.

The estimate will be held until the missing documents are received and/or the disputes have been resolved. After these conditions are met, a copy of the estimate and the stamped final voucher will be sent to the contractor. When the signed final voucher has been returned, it will be forwarded to Finance and the final payment will be made.

For city or county projects, the letter to the contractor will be sent by the Project Engineer, not from Construction Services.

LOCAL AGENCY PROJECT FINAL RECORDS

After final payment has been made to the contractor for city or county projects and the FHWA has processed the final voucher, Construction Services will return project records to the city or county for storage. The city or county will retain these records for three years after the final voucher is issued by FHWA.

PROJECT NARRATIVE REPORT TEMPLATE

Project Narrative Report

Project Number(s):

PCN:

Location:

Type of Work:

Prime Contractor:

Project Engineer:

Name of Person Completing this Report:

General:

1. Please provide a general explanation of work elements involved in this project:
2. Are there any unresolved NOI's or pending claims existing on this project? If so, please call NDDOT Construction Services Division (David Bruins: 701-328-2544) prior to completing this form.

Plans:

1. Did you encounter any good aspects or problems with the existing design and/or plan sheets? If so, please suggest continuation of practices and/or improvements:
2. Were there project notes that should or should not be used on similar projects in the future?
3. Were the project notes adequate for the construction and contract administration of the project? If not, please suggest improvements that could be made to the project notes:
4. Were there traffic control problems? If so, what could be done differently on similar projects in the future?

Special Provisions:

1. Did you encounter any good aspects or problems with the Special Provisions? If so, please suggest continuation of practices and/or improvements:

Specifications:

1. Did you encounter any good aspects or problems with the Specifications? If so, please suggest continuation of practices and/or improvements:

Contractor:

1. Were there problems encountered with the contractor or subcontractors' work force?
2. Did the contractor and/or subcontractor(s) have adequate equipment and personnel?
3. Did the contractor do or suggest anything new or innovative which could be used on similar projects in the future?

Utilities:

1. Did utilities impact the project?
2. Were there any utilities that were not responsive or did not follow agreed-upon schedules?

Materials:

1. Please describe any materials problems and/or suggestions here. (This can include comments on the suitability of materials sources, pre-bore information, accuracy of soil reports and borrow investigations, aggregate, asphalt, or concrete issues & suggestions):
2. Any issues in sampling, testing, or acceptance of materials?
3. Were there any issues on the project that would warrant future research?

CARS:

1. Did you have any issues with CARS?
2. Do you have CARS-related comments or suggestions for improvement?

Construction Records Manual

1. Did you find what you needed in the Construction Records Manual? Do you have any comments or suggestions for improvement?

Final Comments

1. Do you have any other final recommendations for future projects of a similar nature which were not covered above?

EXAMPLE FINAL ACCEPTANCE LETTER

MM/DD/YYYY

CONTRACTOR NAME
CONTRACTOR ADDRESS
CONTRACTOR ADDRESS

PROJECT #, PROJECT TYPE
PCN
County

You are hereby notified that the above-referenced project was completed on MM/DD/YYYY. The project was inspected and accepted by North Dakota Department of Transportation (NDDOT) on MM/DD/YYYY. This acceptance does not, however, waive the Owner's legal rights outlined in Section 105.16 of the NDDOT Standard Specifications. Acceptance of the field work does not constitute completion of the Contract.

The NDDOT will begin the process of preparing a final progressive estimate in accordance with NDDOT Standard Specification Sections 105.15 C. and 109.06. This process may require the Contractor to provide additional documentation or to assist with reconciling the project records.

Final payment under the terms of the Contract, including release of retainage, will occur upon the Department's receipt and approval of the signed final payment voucher from the Contractor.

PROJECT ENGINEER

c: NDDOT/District
NDDOT

EXAMPLE COMBINED PROJECT/MATERIALS ACCEPTANCE LETTER

MM/DD/YYYY

Construction Engineer Name
Construction Services Engineer
North Dakota Department of Transportation
608 East Boulevard Ave
Bismarck, ND 58501

SUBJ:	PROJECT:	<i>PROJECT NUMBER</i>
	COUNTY:	<i>COUNTY</i>
	TYPE OF WORK:	<i>TYPE OF WORK</i>
	CONTRACTOR:	<i>CONTRACTOR NAME</i>

This is to certify that:

The Contractor was notified by the Project Engineer on *MM/DD/YYYY* that field work on this project was completed on *MM/DD/YYYY*. On *MM/DD/YYYY*, the NDDOT reviewed the project with Project Engineer *NAME* and *NAME*, NDDOT. The Owner has reserved their legal rights outlined in the NDDOT Standard Specifications.

Materials were tested and accepted by the Project Engineer and assurance testing was completed and approved by NDDOT in accordance with the NDDOT Field Testing and Sampling Manual. Minor exceptions to this certification are explained on the back hereof.

No significant exceptions to the plans and specifications were noted, therefore, I recommend acceptance of this project.

NAME, Assistant District Engineer, *NAME* District

att: Engr's Acceptance Ltr.
c: District File
Project File