

CONSTRUCTION RECORDS MANUAL



Prepared for

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

Bismarck, North Dakota

Website: <http://www.dot.nd.gov/>

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CONSTRUCTION RECORDS MANUAL

FORWARD

Resident engineers, project engineers, consultants, office personnel and others associated with construction operations must keep accurate and complete records of the work and submit them promptly as required. The goal of this manual is to provide construction personnel with procedures for documentation of construction activities and pay items and to provide instructions for the operation of the Construction Automated Records System (CARS). This manual should not be interpreted to provide a legal standard of care or a strict code of conduct to be followed.

Accurate measurements and calculations of contract quantities are essential to good record keeping. Records must be accurate, complete, understandable and neatly kept.

The instructions and examples in this manual are suggested methods of record keeping under normal circumstances. The records keeping methods outlined in this manual are considered a minimum requirement. Additional records may be required to completely document contract pay items and construction activities on the project. Adjustments may have to be made on a case by case basis for situations not covered by the manual.

This manual contains some instructions that relate to the NDDOT's internal methods of operation. These instructions (purchasing equipment, vehicle expense, etc.) are not intended to govern on projects where county/city/consultant engineers perform the construction engineering. However, the county/city/consultant engineers are expected to follow the record keeping procedures described in this manual.

This manual is not a contract document. Nothing in this manual replaces, modifies or supercedes any provision of the contract documents. In the case of discrepancies between contract documents and this manual, contract documents such as the project proposal, the project plans and the North Dakota Standard Specifications for Road and Bridge Construction will govern.

The policies and procedures of this or any other manual may be changed at any time without notice to NDDOT employees or third parties including county/city/consultant engineers. Those relying on this information should satisfy themselves as to the most current version. The user agrees to accept all risks and consequences flowing from or related to the use, retention, distribution, alteration, or deletion of this information. NDDOT will in no instance be liable for any loss of profit or other damage, including but not limited to special, incidental, consequential or other damages, even if apprized of the likelihood of such damages.

Definitions for terms used in this manual can be found in Section 101.02 of the Standard Specifications for Road & Bridge Construction. The Standard Specifications are in book form but can also be found on the DOT web page by:

1. Go to the DOT web page at <http://www.state.nd.us/dot/>.
2. Click on the Doing Business with NDDOT button.
3. Click on the link for the Standard Specifications under the Maintenance & Engineering heading.
4. Links for Volume 1 and 2 are found under the heading for the Standard Specifications.

The Construction Records Manual can also be found on the DOT website. A link for the manual can be found under the Construction Division heading on the 'Doing Business with NDDOT' page of the DOT website. The manual is in a .PDF format.

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SFN 10061	Statement of Material Taken From Pits
SFN 10072	Aggregate Quality Test Summary
SFN 10110	Project Engineer's Report on Materials Acceptance
SFN 13420	Report of Bridge Bench Marks and Check Points
SFN 13890	Equipment Rental and Wage Rates Agreement
SFN 13891	Request for Equipment Rental Rate Determination
SFN 13986	Weekly Payrolls
SFN 14268b	DBE Participation Certification
SFN 14458	Road Release Statement
SFN 14461	Contractor Request for Extension of Contract Time
SFN 14486	Pit Release Statement
SFN 14634	Traffic Control Watchperson Report
SFN 16082	Earthwork Computations & Shrinkage
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Section 1

CONSTRUCTION ADMINISTRATION

RESPONSIBLE CHARGE

As a recipient of Federal-aid funds for the state, the NDDOT is responsible for ensuring that Federal-aid funds are expended in accordance with applicable Federal laws and regulations.

This responsibility includes ensuring adequate supervision and inspection to ensure projects are completed in conformance with the approved plans and specifications.

Federally funded projects shall have a full time public employee in responsible charge of the project.

NDDOT PROJECTS WITH FEDERAL AID

For NDDOT administered Federal-aid projects, the District Engineer shall name a full-time NDDOT employed engineer as the person in “responsible charge.” This requirement applies even when consultants are providing construction engineering services. The person in “responsible charge” shall be identified in the pre-construction conference meeting minutes.

Roles of NDDOT Responsible Charge

1. Primary point of contact for FHWA
2. Attends all key project meetings – if the responsible charge cannot attend, rescheduling of meeting will be attempted. Key project meetings – such as: Project pre-construction conference and meetings involving Federal-aid issues
3. Attend final inspection
4. Must be involved in and/or knowledgeable of key project decisions

Responsibilities of the NDDOT Employee in Responsible Charge

1. Ensures project is constructed in accordance with the plans and specifications
2. Oversee project activities involving costs, schedules, quality, and project changes
3. Be familiar with project status.
4. Be aware of the qualifications, assignments, and on-the-job performance of the engineering staff during all stages of the project
5. Conduct a one-on-one meeting with engineering staff prior to the preconstruction conference. At this meeting the person in “responsible charge” and engineering staff shall discuss required construction contract administration and any project specific expectations
If a consultant is performing the engineering, they shall be required to submit the qualifications for the project’s inspectors and material testers that will be used on the project. Spot checks and verification will need to be done during the duration of the project on the qualifications of the consultant’s inspectors and testers in the field
6. Review financial processes, transactions and documentation for the project
7. Direct and ensure engineering staff carry out construction project administration in accordance with contract documents
8. Administer change orders in accordance with their level of authority. Manage project agreements and any supplements to them
9. Maintain familiarity of day to day project operations & safety issues, including work zone safety requirements
10. Visit and review projects on regular basis (in proportion to the project scope and size)
11. Review and ensure final estimate and final documentation is completed timely

LOCAL PUBLIC AGENCY (LPA) PROJECTS

For locally administered Federal-aid projects, the LPA shall name a person in “responsible charge” for each project. The person in responsible charge must be a full-time employee of the LPA. The person in responsible charge need not be an engineer. The person in “responsible charge” shall be identified in the pre-construction conference meeting minutes.

Roles of LPA Responsible Charge

1. Primary point of contact for the LPA will be the NDDOT
2. Attends all key project meetings – if the responsible charge cannot attend, rescheduling of meeting will be attempted. Key project meetings – such as: Project pre-construction conference and meetings involving Federal-aid issues

3. Attend final inspection
4. Must be involved in and/or knowledgeable of key project decisions

Responsibilities of the LPA Employee in Responsible Charge

1. Ensure project is constructed in accordance with the plans and specifications
2. Oversee project activities involving costs, schedules, quality and project changes
3. Be familiar with project status.
4. Be aware of the qualifications, assignments, and on-the-job performance of the engineering staff during all stages of the project
5. Conduct a one-on-one meeting with engineering staff prior to the preconstruction conference. At this meeting the person in "responsible charge" and engineering staff shall discuss required construction contract administration and any project specific expectations
If a consultant is performing the engineering, they shall be required to submit the qualifications for the project's inspectors and material testers that will be used on the project at this meeting. Spot checks and verification will need to be done during the duration of the project on the qualifications of the consultant's inspectors and testers in the field
6. Review financial processes, transactions, and documentation for the project
7. Direct and ensure engineering staff carry out construction project administration in accordance with contract documents
8. Administer change orders in accordance with their level of authority. Manage project agreements and any supplements to them
9. Maintain familiarity of day to day project operations & safety issues
10. Visit and review projects on regular basis (in proportion to the project scope and size)
11. Review and ensure final estimate and final documentation is completed timely

Duties for NDDOT on LPA Projects

1. Attend preconstruction conference
2. Attend meetings when a major decision is needed
3. Verify that LPA ensures project is constructed in accordance with the plans & specifications
4. Review & approve change orders
5. Verify that LPA ensures work zone safety requirements are being implemented on the project
6. Attend final Inspection
7. Review final estimate

Construction Engineering Provided by County, City, and/or Consulting Engineers

County, city, and consulting engineers will provide their own supplies unless otherwise specified by special agreement between the department and the county, city, or consultant. Many construction forms can be found on the DOT's website. Other forms, such as pay quantity report forms are available through the DOT district offices.

Manuals and Documents for Construction Oversight

1. *Construction Records Manual*
<https://www.dot.nd.gov/manuals/construction/constr-records/constructionmanual.htm>
2. *Standard Specifications for Road and Bridge Construction*
<https://www.dot.nd.gov/dotnet/suplspecs/StandardSpecs.aspx>
3. *Field Sampling and Testing Manual*
<https://www.dot.nd.gov/divisions/materials/testingmanual.htm>
4. *External Civil Rights Manual*
<https://www.dot.nd.gov/manuals/civilrights/civil-rights-manual.pdf>
5. *Inspection Checklist*
<https://www.dot.nd.gov/manuals/manuals-publications.htm>

6. *Erosion and Sediment Control Handbook*
<https://www.dot.nd.gov/manuals/environmental/escm/escmfinal.pdf>
7. *Davis-Bacon and Payroll Requirements Handbook*
<https://www.dot.nd.gov/manuals/civilrights/davisbacon.pdf>
8. *Department Safety Manual* (for NDDOT employees)
<http://mydot.nd.gov/manuals/maintenance/safety%20manual.pdf>

**District and Central Office
Addresses and Phone Numbers**

Office	Address/Phone
Bismarck District	218 S Airport Rd Bismarck, ND 58504 328-6950
Valley City District	1524 8th Ave SW Valley City, ND 58072 845-8800
Devils Lake District	316 6th St S Devils Lake, ND 58302 665-5100
Minot District	1305 Hwy 2 Bypass E Minot, ND 58302 857-6925
Dickinson District	1700 3rd Ave W Dickinson, ND 58602 227-6500
Grand Forks District	1951 N Washington Grand Forks, ND 58206 787-6500
Williston District	605 Dakota Parkway W PO Box 698 Williston, ND 58802 774-2700
Fargo District	503 38th Street South Fargo, ND 58103-1198 239-8900
Materials & Research	300 S Airport Rd Bismarck, ND 58504 328-6900
Construction Services	608 E Boulevard Ave Bismarck, ND 58505-0700 328-2563
Design	328-2555
Bridge	328-2592
Civil Rights	328-2576
Environ. & Trans. Services	328-2590

Maintain a list of emergency numbers at the field office and field lab. Provide the list to staff and also post in an easily viewable location.

Construction Project Filing System

Maintaining an orderly filing system is essential in keeping records.

The following outline is recommended as a field office filing system. Listed under each file type are the items included.

1. Project File
 - a. Progress Reports
 - b. Change Orders
 - c. Estimates (estimates may be printed and filed if desired but it is not necessary as they can be viewed or printed at any time using CARS)
 - d. Detailed Estimate
 - e. Bidder's Proposal
 - f. Correspondence
 - g. Miscellaneous

On large projects, it may be necessary to make separate files for some of the items in the Project File such as Correspondence.

2. Daily Inspection Reports (SFN 16767)

Project inspector's reports of the contractor's work activities, personnel, equipment and work hours. These are filed by date with the most recent date on top and may also be divided by contractor.
3. Pay Quantity Reports (SFN 10004)

Documentation of individual pay items. These should be filed by spec and code as listed on the detailed estimate and separated by subproject if there is more than one on the project. Within each spec and code, the reports should be filed by date with the most recent date on top.
4. Laboratory File

All items pertaining to materials such as test reports, certified analysis, lab correspondence, etc.
5. Haul Sheet File

Haul sheets are filed by type of material hauled and are filed in numerical order with the most recent haul sheet on top. Contractor generated haul sheets are also collected and filed in this manner. CARS generated haul sheets can be printed and filed but it is not required.
6. File for Contractor's Payrolls

Payrolls and correspondence pertaining to the contractor's payrolls. Payrolls should be divided by contractor or subcontractor and filed in date order with the most recent date on top.

Note: On some smaller projects, all of the above files may not be required due to the small amount of records. In this case, files may be combined except reports dealing with laboratory tests which should be filed separately.

EEO, DBE and Labor Compliance Information

A separate file for the following items can be used but is not required. These items can be incorporated into other files. Refer to the External Civil Rights Manual for more information, instructions, examples, etc. about these documents.

1. Pre-Job Conference - EEO, Labor Standards, and DBE Participation Information, SFN 9423 (Rev. 04-2004) *File with other project correspondence*
2. DBE Participation Review (RC), SFN 13743a or DBE Participation Review (RN), SFN 13743b *File with the project proposal*

The following documents can be filed in the Payroll file:

1. Labor Compliance and EEO Contract Compliance Job-Site Interview, SFN 9426 (Rev. 05-2000)
2. Monthly EEO Project Inspection Report, SFN 9425 (Rev. 03-2003)
3. Contractor's Annual EEO Report, FHWA-1391 (Rev. 04-2005)
4. Contractor's affirmative action recruitment-selection procedures
5. EEO, DBE, and labor compliance directives or instructions (can be part of Diary)
6. EEO, DBE, and labor compliance discussions held with the contractor (can be part of Diary)
7. EEO/DBE meetings held by the contractor with employees
8. Any other EEO, DBE, or labor compliance related information

Many of the forms listed above, along with the External Civil Rights Manual, can be found on the DOT website under Doing Business with NDDOT - Civil Rights Office.

Vehicle Operation Expenses

Obtain gasoline and oil from the NDDOT district facilities whenever possible. Additionally, each state vehicle is issued a credit card for the purchase of gasoline, oil and any miscellaneous items. Other items of greater cost should be placed on a purchase order. Credit card purchases **must** be completed to include type of fuel, quantity, price per gallon, and the total amount. Other purchases must be accompanied by an itemized receipt.

Before purchasing, drivers should verify that the station will accept the credit card or a purchase document. Other expenditures over \$75 **must** be authorized by phone by the district shop in the district you are located.

The state issued credit card accompanying your assigned vehicle may be used for:

1. Gasoline - any amount
2. Oil changes/adding oil
4. Fixing tires
5. Miscellaneous items
6. Emergency purchases

Purchase orders may be used for:

1. Emergency purchases
2. Large purchases (with district approval)
3. Purchases not accepted by credit card

Make certain all entries are complete and legible. Submit the invoices to the district office.

Complete policies and procedures for the care and operation of state fleet vehicles are found in the State Fleet Services Policy Manual. This manual can be viewed on the DOT website at <http://www.dot.nd.gov>. Click on the State Fleet button and then the link for the manual.

Field Office Internet Access & Telephone Service

Installation of internet and phone service in the field office is accomplished by submitting a notification of need to ITD-Radio. This notification must be submitted a minimum of six weeks ahead of time and must be submitted on SFN 14272 Request for Computer Software/Equipment & Computer System Changes. An estimated time frame for the project should be included on the request including time the field office would be closed for winter suspension.

ITD-Radio will determine the best and most economical method for internet and phone services for the field office and take care of installation and proper billing to the project.

Office Rental, Telephone, Utilities

Authorization for payment of office rental, telephone, and utilities is made on a Purchase Order, SFN 2188, which is prepared in the district office.

Bills are checked in the field office and projects charged for these bills will be listed. Initial each bill to indicate approval for payment. Submit the bill to the district office.

Hardware, Lumber and Other Miscellaneous Items

A purchase order will be used when making authorization for payment of these items. The field office must complete and submit a purchase order (SFN 2188 Purchase

Order) for each invoice for each firm. Purchase orders are in book form and are obtained from the district office.

Instructions for completing purchase orders are in the Accounting Manual. The engineer should get these instructions from the district for use in the field. Purchase orders are prepared in quadruplicate. Give the white copy to the vendor (dealer); submit the goldenrod and pink copies to the district office. Discard the yellow copy. Always attach invoices or receipts to the purchase order. Purchase orders can be made out anytime during the month and should be submitted at least once each month.

Sometimes a permanent employee will make a small purchase or will have to purchase supplies and a purchase order is not available. Reimbursement will be made on the employee's personal expense voucher on SFN 2190 Time Distribution/Equipment Use Report. The receipt for the purchase should be included on the voucher. Any tax assessed on the purchase cannot be reimbursed.

Purchase orders that have been voided shall also be submitted to the district office.

SUBCONTRACTING

Requests to Sublet, SFN 5682

In accordance with Section 108 of the Standard Specifications, a contractor shall not sublet any portion of a contract without the consent of the Engineer.

Before a subcontractor starts work on NDDOT projects, the request to sublet (SFN 5682) shall be approved by the District Engineer or approval may be assigned to the Project Engineer. Requests to sublet on non-DOT projects (i.e. County and City projects) are approved by the Project Engineer. The following steps outline the procedures for subcontract approvals.

1. Notify all contractors at the pre-job conference that the Request to Sublet forms, SFN 5682, are submitted to the district engineer/project engineer and that these forms must be approved before a subcontractor starts work on the project. If subcontractors want lower tier subcontractors to perform part of their work, the contractor shall submit a Request to Sublet for approval of the lower tier subcontractor along with the Request to Sublet for their work.
2. Subcontractors who are not currently pre-qualified, certified as a Disadvantaged Business Enterprise (DBE), or registered with the DOT for the type of work being subcontracted must submit SFN 52243 Subcontractor Registration. The subcontractor must list their work experience and equipment on the registration form. A list of current pre-qualified contractors, certified DBE's, and registered subcontractors is available from the Construction Services Division and on the NDDOT website under 'Doing Business with NDDOT. Department employees can view a list of pre-qualified contractors and DBE's on the mainframe computer and on the website.
3. The District or Project Engineer shall review the Request to Sublet for the following items:
 - a. The maximum percentage that can be sublet shall be 70 percent. The calculations of the percentage subcontracted must include the cost of materials and manufactured products, if included in the subcontract. Specialty items may be performed by subcontract. The dollar amount of the specialty work items should be deducted from the total original contract costs prior to computing the amount of the work required to be performed by the prime contractor. Specialty items should be specified as such in the proposal.
 - b. When Condition of Award items (i.e. items committed to be done by a Disadvantaged Business Enterprise firm or other small business at the time of award) are sublet, the Project Engineer should ensure that the total

amount on the Request to Sublet form is equal to or greater than the amount in the Condition of Award and the conditions of award items are sublet to the proper subcontractor. Condition of Award items are listed on the DBE Participation Review form and on Form C, 'Notification of Intent to Use DBE' which are provided to the districts by the Civil Rights Office.

c. When added work is subcontracted, the percentage shall be reflected as a zero entry and noted as 'Added Work' on the Request to Sublet form. A Request to Sublet will not be required for added work on a project performed by a previously approved subcontractor on the project.

d. The Contractor shall ensure that the Subcontractor has received, when applicable, the following specified provisions.

- (1) EEO Affirmative Action Requirements
- (2) Labor Rates from U.S. Department of Labor
- (3) Required Contract Provisions Federal Aid Construction Contracts (FHWA-1273) and any addendums attached
- (4) Other federal aid provisions such as Buy America clauses. No subcontracts, or transfer of contract, shall relieve the contractor of liability under the contract bonds.
- (5) Appendix A of the Title VI Assurances.
- (6) Disadvantaged Business Enterprise Program Special Provision.

4. The Contractor should fill out the Request to Sublet form listing the items covered by the subcontract and the amounts the Contractor is actually paying the Subcontractor. A copy of the subcontract agreement between the prime contractor and the subcontractor must be attached to the Request to Sublet. This is submitted to the District or Project Engineer for approval.

a. The District Engineer or Project Engineer shall show the % Sublet This Request (total subcontract amount divided by the original contract amount) and the Total % Sublet to Date for that contract.

b. The Project Engineer will make the following distribution after the Request to Sublet has been approved:

- (1) The original Requests to Sublet form and, if required, the Subcontractor Registration form SFN 52243 should be submitted to the Construction Services Division.
- (2) One copy of the approved Request to Sublet to the prime contractor.
- (3) One copy of the approved Request to Sublet to the subcontractor.
- (4) One copy of the Request to Sublet to the district file.
- (5) One copy of the Request to Sublet to the project file.

Subcontract Requirements for Traffic Control Signing

A sign supplier who delivers and installs the construction signs on the project is considered a supplier if, after the initial installation, the prime contractor maintains the signs on the project, and the prime contractor assumes the responsibility of relocating the signs on a day-to-day basis.

Supplied Labor

At times, contractors will use a staffing agency to fill general labor positions such as flaggers. No subcontract is required between the contractor and the staffing agency but Davis-Bacon wage rates would apply. The employees supplied by the agency must appear on the contractor's payroll or on a payroll supplied by the staffing agency.

Contractor Compliance Review

The district must set up a compliance review schedule on State and Local Government sponsored federal aid projects to ensure that the subcontractor is aware of the applicable contract provisions and that subcontractors are not suspended or debarred. This compliance review consists of an interview with the subcontractors on about ten percent (10%) or not less than one (1) of the federal aid projects in the district. Documentation of this compliance review is required and is maintained in the district files for FHWA review.

During the compliance review, one thing to do is verify the subcontractor has the FHWA 1273 attached to their subcontracts. The subcontractor interview can be done in person (on the project site is acceptable), by phone or by other means as necessary.

CONTRACTOR'S PAYROLLS

General

On all federal-aid projects, the Bidder's Proposal contains the U.S. Department of Transportation form, FHWA 1273 "REQUIRED CONTRACT PROVISIONS, FEDERAL-AID CONSTRUCTION CONTRACTS". FHWA 1273 provisions outline requirements relating to wages, payrolls and statements of compliance.

The engineer monitors the prime contractor's and each subcontractor's payroll compliance on all federal-aid projects. Compliance will be according to FHWA 1273.

The prime contractor and each subcontractor is required to submit weekly payrolls to comply with the provisions of the FHWA 1273. Department policy requires the contractor to submit all payrolls with the required Statements of Compliance before reducing the retainage to 1 percent (1%) of the completed work.

State-funded project proposals do not contain a predetermined wage rate and the contractor or subcontractor is not required to submit payroll information. However, the contractor and subcontractor should maintain records that show payment has been made.

Payrolls

Check with the Department's Civil Rights Office before the pre-job conference to determine the number of copies of payrolls needed. The contractor and subcontractor are required to submit the necessary copies of the weekly payroll and Statement of Compliance to the **engineer**. The engineer retains one copy for the project file, and if necessary, retains one copy for the U.S. Department of Labor during odd numbered years.

The engineer is responsible for obtaining the payrolls from the contractor and checking for accuracy. SFN 13986 will aid in monitoring the contractor's compliance. Upon receiving payrolls from the contractor, review them for correct information and computations.

All payrolls shall be reviewed and **shall not** be reviewed on a sample basis. Each Statement of Compliance shall certify that the payroll is correct and complete and that the wage rates shown are not less than those specified in the bidder's proposal for the applicable classification.

If corrections are necessary, **under no circumstances shall the payroll be returned to the contractor for corrections. Instead, it is necessary for the contractor to furnish a supplemental payroll.** Copies of supplemental payrolls are submitted in the same manner as regular payrolls.

When reviewing the contractor's payrolls, the following **minimum** information must be included :

1. Name and address of the contractor
2. Project numbers and location
3. Project Number and Sheet No. of on each page of the payroll
4. Begin and end dates for the week the payroll covers
5. The full name, address, and social security number of each employee
6. Correct classifications and wage rates for specific job classifications
 - a. Power Equipment Operators **must** be listed as Power Equipment Operators Groups 1-6. Listing the type of equipment operated after the group number is optional.
 - b. Truck drivers **must** be listed using one of the following categories:
 - (1) Single-Axle Truck
 - (2) Tandem- and Tri-Axle Truck
 - (3) Tandem- and Tri-Axle Semi
 - (4) Lowboy
 - (5) Off Road Heavy Duty End Dump (20 yard and under)
 - (6) Euclid (over 20 yards)
 - c. The following positions are **not** subject to the Davis-Bacon and Related Acts. Therefore, there is no prevailing wage for these positions nor are they required to be listed on the project payrolls.
 - (1) Bituminous Mix Tester
 - (2) Bituminous Pavement Inspector
 - (3) Bituminous Mix Controller
 - (4) Aggregate Tester
 - d. Owner-operators of trucks are not covered under the Davis-Bacon and Related Acts. Owner-operators of other types of equipment are considered employees under the Davis-Bacon and Related Acts and must be paid the correct wage rate. All truck owner-operators must be shown on the payroll and identified as owner-operators only. No hours worked nor rate of pay need be shown for truck owner-operators.
 - e. Should it become necessary to employ a person or persons in a labor category not included in the predetermined rates in the proposal, the contractor shall immediately notify the District Construction Coordinator or Assistant District Engineer. The Department requests contractors anticipate their need for new labor classifications before the time the new classifications are actually needed on the project. If possible, group all new classifications required into one request and send the request to the Construction Coordinator or Assistant District Engineer.
 - f. In requesting a new classification and wage rate, certain procedures must be followed. The District Construction Coordinator or Assistant District Engineer should contact the Civil Rights Office to obtain the necessary forms and instructions.
7. Total hours worked per day and the hourly rate are shown including straight time and overtime hours and rates.

After determining that the payroll contains the minimum information listed, the computations should be checked for accuracy. All extensions should be checked on handwritten payrolls but extensions on computer generated payrolls only need to be spot checked. Deductions must show the appropriate heading for each deduction such as FICA, Federal and State withholding, etc.

The Davis-Bacon wage rates for power equipment operators, truck drivers, cement masons/concrete finishers, carpenters, electricians, and electrical line construction classifications also include amounts for health & welfare/pension in addition to the basic hourly rate. The contractor can pay the health & welfare/pension amounts into a fund for the employee or pay the employee in cash. The weekly 'Statement of Compliance Form WH-348' attached to the front of each payroll has a section with check boxes to indicate which method the contractor is using to pay the health & welfare/pension amounts to the employee.

If the contractor pays the health & welfare/pension into a fund, the basic hourly rate will be shown on the payroll. If the employee is paid these funds in cash, it can be shown a couple of ways on the payroll.

1. The hourly rate is shown as the total of the basic hourly rate plus the rate for health & welfare/pension. The overtime rate is computed by multiplying the basic hourly rate by 1½ and adding it to the health & welfare/pension rate.
2. The hourly rate is shown as the basic hourly rate from the proposal. The basic hourly rate is also used to compute the rate for overtime. The health & welfare amount is computed by multiplying the rate times the combined straight and overtime hours and the total will be shown in the net amounts.

The net amount paid should be shown for each employee. This is the gross amount due minus any deductions. The gross amount for the entire payroll should also be shown.

The preceding instructions for checking payrolls and monitoring labor compliance are basic guidelines. Detailed information for payroll requirements and labor compliance issues can be found in the NDDOT External Civil Rights Manual and in the Davis-Bacon Wage and Payroll Requirements handbook. The manual and handbook can be found on the DOT website under Doing Business with NDDOT - Civil Rights Office.

Weekly Statement of Compliance

Requirements for the submission of payrolls are not to be confused with the requirements for submission of the weekly Statement of Compliance concerning the Copeland Anti-Kickback Act and Davis-Bacon fringe benefit provisions. A sample follows this section or click [here](#) for fillable form.

Each contractor and subcontractor is required to file this weekly Statement of Compliance for all federal-aid projects. All items must be completed including a list of all deductions.

False Statements Concerning Highway Projects

In order to ensure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons involved with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsifications, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. Refer to FHWA 1273 for more information.

If you suspect willful falsification of a payroll certification, or know of a wage rate complaint, determine the extent and seriousness of the incident. Notify the Civil Rights Office of the incident. They will offer assistance or guidance and will notify FHWA of the incident.

Distribution

The contractor shall furnish copies of the weekly payrolls with the Statement of Compliance to the engineer for distribution as follows:

1. One copy to the engineer's project file.
2. One copy to the engineer's U.S. Department of Labor file, if required during odd numbered years. (Combine this copy with the U. S. Department of Labor payrolls from other projects within the district, and forward to the Civil Rights Office at the end of the construction season.)

SECTION 2
CARS (CONSTRUCTION AUTOMATED RECORDS SYSTEM)

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CARS Procedures

The Construction Automated Records System or CARS is the NDDOT's computer based construction records system. The system uses the internet for data entry and stores project records on a central database. Reports generated in CARS can be viewed online at any time so copies do not have to be printed and filed. Pay estimates are prepared and approved online allowing for more timely payments to the contractor.

User ID & Passwords

Before being able to enter or view data, CARS users are assigned a user ID and user's rights by the Information Technology Division. The user ID and a password allow you to login to the CARS system. The user rights assigned determines what access you have to view and edit data. Consultants, counties and cities must fill out and submit SFN 53085 LDAP Account Information to Construction Services in order to get a user ID and be assigned user rights. DOT employees will be required to fill out the LDAP Account Information form and submit it along with SFN 14272 Request for Computer Software/Equipment & Computer System Changes. The request must be signed by their division director and submitted to the Information Technology Division.

The SFN 53085 LDAP Account Information form can be obtained by going to the following address:

www.dot.nd.gov/forms/sfn53085.pdf

User ID information will be mailed to the CARS coordinator for cities, counties and consultants. Department employees will receive User ID information by email.

If you will be using temporary employees for data entry, you will have to submit the LDAP Account Information form for that employee. The Information Technology Division should also be informed when a User ID is no longer being used such as when temporary or permanent employees are no longer working for an organization. User ID's will be audited for activity from time to time and if no activity is shown within a certain time frame, the User ID will be removed.

The User ID will be sent out with a generic password and the user will be required to change their password the first time they log in to CARS. To change your password:

1. Click on the Change Password link.
2. Sign in with your User ID and the generic password given to you by ITD. The Change Password page is displayed.
3. Enter your new password. Passwords are case sensitive and must contain the following:
 - a. At least 6 characters
 - b. At least 1 uppercase letter
 - c. At least 2 lower case letters

- d. At least 1 number
4. Type the password in the second text box to confirm and click on the Login key. This will take you to the Main Menu of CARS.

Write down your password and store it in a secure location. If you forget your password, contact the Information Technology Division. Consultant, county and city users will be required to know the answers to the two hint questions submitted on the LDAP Account Information form or they will be unable to get their password information.

Login to the CARS Program

Access to the CARS programs is provided on the NDDOT website. To access CARS:

1. Go to the DOT website at <http://www.dot.nd.gov/>.
2. From the home page, click on the 'Doing Business with NDDOT' button
3. A link for CARS can be found on the 'Doing Business' page under the Construction Division heading.
4. Click on the CARS link to go to the Login page.
5. Type in User ID and Password and click the Login button.
6. The CARS Main Menu is displayed.

Navigation

The same methods used to navigate Internet Explorer are also used to navigate in CARS. The following lists the most common navigation tools used.

1. Links
Links are usually colored, underlined text but can also be a picture or 3-D image. To check whether an item is a link, put the mouse pointer over the text or the image. If it turns into a hand, it is a link. Clicking on the link will take you to the page indicated by the link.
2. Text Box
Text boxes are used throughout CARS to enter data composed of numbers, text or both. A cursor will appear when you click inside the text box and data can be entered in the box. Sometimes data will be entered in a series of text boxes. Use the TAB button to move to the next text box.
3. Drop Down Box
A drop down box looks similar to a text box but it has an arrow pointing down on the right side. By clicking on the arrow, a list 'drops down' from the box with a list of different options that may be chosen to fill the box.

4. Check Box
Check boxes can be used to modify data or select a certain record. A check box is a square next to entered data or a record. Clicking inside the check box will put a check mark or an 'X' in the square. This indicates the data or record has been selected.
5. Buttons
Buttons are used throughout CARS to perform various functions such as SAVE, RETURN, SEARCH, etc. Clicking on them activates these buttons.
6. Radio Buttons
CARS also uses radio buttons. These are small circles followed by text and are used to pick a certain option within a data entry page. To select an option, click inside the radio button and a small black circle will appear. Only one choice can be made in a group of options with radio buttons. If you click on one radio button in a group of options and then click on another, the black circle will disappear from the first choice.

Input Basics

The following list is basic information needed to enter data into CARS.

1. CARS uses a time out feature. The session will time out after 30 minutes if there is no activity registered and data entered but not saved may be lost. If you are logged on and are interrupted, it is recommended that you click on the Save button before leaving your computer. It is also recommended that you click on the Save button every so often when entering tickets for a haul sheet, especially for haul sheets with a large number of loads. Entering tickets on the Haul Sheet Maintenance page does not register as activity and the session could time out before you finish the tickets.
2. **DON'T USE THE BACK BUTTON!** The program will function using the back button but you may lose data or you may get a 'Warning: Page has Expired' error message. If this occurs, click the Refresh button on the Internet Explorer tool bar. A dialog box appears asking you to use the Retry button to send the information again. Click on the Retry button and you will be returned to the previous page.
3. The TAB key can be used to move from one input field to the next. As you get used to working in the new CARS format, you will find the TAB key very useful for moving around in the data entry boxes.
4. The date and time must be entered in the following formats or an error message will be generated.
 - a. All time is entered as military time but also uses a colon for example 4:00 PM would be entered as 16:00

- b. Dates are entered 00/00/0000
5. Station/Location format
 - a. Stations are entered without the plus for example Sta. 100+32 would be entered as 10032
6. The project and subproject displayed at the top of the screen will be the same as the project from the last logon. Change these by clicking on the Project or Subproject link. This will take you to the Project Search Criteria page where you can change the project or subproject.
7. The Main Menu can be accessed by clicking on the link in the top right hand corner or the button at the bottom of each page.
8. Pay items are marked by release flags that indicate if they are paid.
 - a. R – for release. Can still be edited
 - b. E – examined. Selected for preliminary estimate. If the estimate is not approved, you will still have the opportunity to rectify any input errors.
 - c. S – submitted. Waiting for estimate approval. At this point, records can be viewed but you will no longer be able to edit them.
 - d. P – paid
9. A change order drop down box will be found in pay quantities, mix bitumen, concrete paving and haul sheets. This is used to indicate when a pay item is affected by a change order.
10. Deleting records
 - a. Check box for deleting rows
 - b. Delete button deletes the entire record
11. Printing reports requires having Adobe 5.0 Reader which can be obtained free from the DOT website. If the reports do not generate, check the settings. Also, the full version of Adobe Acrobat will not generate the reports. The reader will have to be downloaded and set as the program that opens the CARS reports. If you are still having problems generating the reports, you will have to change settings in the Reader by:
 - a. From the Start Menu on your computer, open the Adobe Reader.
 - b. Click on Edit and choose Preferences.
 - c. From the list on the left hand side, go to Options.
 - d. There are four check boxes under Web Browser Options. The first two boxes (Display PDF in Browser and Check Browser Settings When Starting Acrobat) should be unchecked.

Care of Computer Equipment

Proper care and treatment of computer equipment is essential to keep it in proper working condition. The following list of precautions will help keep computer equipment in good working order.

1. Computer equipment is particularly susceptible to weather conditions such as extremes in heat or cold, dust or wet conditions.
2. Make sure computer equipment is secure in field offices or vehicles. Lock the field office or the vehicle when unattended.
3. Computer equipment can be vulnerable during electrical storms especially in the field office setting. It's a good practice to turn off and unplug the computer during an electrical storm or when you leave the office for the day. Although surge protectors are an essential part of protecting your computer, they will not save it from a lightning strike.
4. **DO NOT** spray window cleaner directly on the screen of the monitor or the display on a laptop as it can damage or destroy this equipment. Cleaning supplies used specifically for monitor screens and laptop displays can be obtained from Supply.

Repairs and Other Problems

Any hardware or software problems that occur should be handled by contacting the NDDOT Help Desk at 328-HELP (4357). If the Help Desk can't assist you at the time of the call, they will log the problem and a technician will be assigned to your problem and will work with you until it is resolved.

Any problems with the CARS programs should be directed to Construction Services at 328-4418 or 328-2912.

Text Box Field Lengths

CARS uses text boxes throughout the program. Typing in more characters than the size of the text box will generate an error. The following table lists the character length of all text boxes in CARS.

TITLE OF FIELD	# OF CHARACTERS
Change Order Maintenance Remarks	200
Change Order Maintenance Explanation of Change	3,000
Change Order Spec/Code Maintenance Description	50
Change Order Spec/Code Maintenance Other	50
Concrete Paving Remarks	200
Haul Sheet Maintenance Remarks	200
Mix Bitumen Maintenance Remarks	200
Pay Quantity Maintenance Remarks	200
Project Diary Days and Weather Maintenance Lost Time Reason	80
Project Diary Section Maintenance – Engineering Staff	500
Project Diary Section Maintenance - Work in Progress	2,000
Project Diary Section Maintenance – Labor Force	500
Project Diary Section Maintenance – Equipment Summary	500
Project Diary Section Maintenance – Project Visitors	500
Project Diary Section Maintenance – Hours Worked	500
Project Diary Section Maintenance – Remarks	2,000
Project Diary Supplement Maintenance – Short Description	30
Project Diary Supplement Maintenance – Remarks	1,000
Stockpile/Invoice Item Maintenance Remarks	200
Construction Status Maintenance Remarks	200
Weekly Progress Report Maintenance – Remarks	2,000
Weekly Progress Report Maintenance – Road Const. Map Info	300
Weekly Progress Report Maintenance – DBE Remarks	200
Contract Adjustment Maintenance – Remarks	200
Contract Adjustment Maintenance – Item Description	50
Final Checklist Maintenance – Remarks	200

Assign Project Engineers & Project Personnel

After the bid opening and award process is complete, the projects are downloaded into CARS from PACER. An email will be sent to the district engineer listing the projects from the bid opening for that district. The district engineer will assign project engineers and/or consultants for each project listed.

After the District Engineer has assigned a project engineer to a project, the project engineer will assign their project personnel. For consultants, the designated CARS coordinator will assign the project engineer to a project who will in turn assign project personnel. Project personnel will be able to update or view project information depending on the user rights they have been assigned by the Information Technology Division of the DOT.

Assign Project Personnel

To assign project personnel:

1. On the Main Menu, check to see that the project displayed at the top of the page is correct. To select a project, click on the Project link in the upper left hand corner of the Main Menu page. The Project Search Criteria page is displayed. Choose your project from the Assigned Project drop down list and click on the Search button. You can also access your project by typing in the project number in the Project ID text box or typing the PCN number in the PCN text box. You will only be able to assign personnel to projects assigned to you.
2. Once you have picked the project, click on the Project Personnel link. The Project Personnel page is displayed.
3. The project engineer's name will be listed under Assigned Personnel. Click on the Assign/Remove Personnel button. The Assign Project Personnel page is displayed.
4. A list of available personnel is displayed in alphabetical order along with their user ID's. To assign personnel to the project, click in the check box in the Assign column.
5. Click on the Save button. If you have tied projects, a dialog box will display asking if you want to update all tied projects. Clicking on yes will assign the personnel chosen to all projects tied to the one shown at the top of the page. If you choose no, you will need to assign personnel to those projects separately.
6. After the assigned personnel are chosen and saved, you will be returned to the Project Personnel page. All personnel assigned to the project will now be listed alphabetically under Assigned Personnel.

If a project engineer is assigned to multiple projects or a large project with several tied project numbers, it is possible to change projects or subprojects from any location within the CARS programs.

Change Projects/Subproject Selection

To change the project or subproject selection:

1. To change the project
 - a. Click on the Project link
 - b. The Project Search Criteria page is displayed. Pick the project by:
 - (1) Choose the project from the Assigned Project drop down
 - (2) Type in the project number in the Project ID text box
 - (3) Type in the project control number in the PCN text box
 - (4) Click on the Search button
2. To change the Subproject
 - a. Click on the Subproject link
 - b. The Subproject Selection page is displayed. All subprojects for the project chosen are displayed under Subproject Search Results. Click on the link for the subproject.
 - c. The Project Search Criteria is also displayed on this page. If the project is changed from this page, the subprojects displayed will change to the ones for that project.

The CARS Main Menu is divided in two distinct categories – Maintenance and Reports. The Maintenance side of the menu is used to make entries into CARS and create reports for the information entered. The Reports side allows you to access any report already created from previously input information. Instructions for use of the various Maintenance and Report functions will be listed by type in subsequent sections of this manual.

CARS/FileNET Electronic Document Database

The NDDOT uses an electronic document management system (FileNET) to store construction project records. FileNET is available to Non-DOT personnel as part of the CARS program.

FileNET document management shall be used for all NDDOT projects where the Contract is signed by the Director. Use of FileNET is not required on Local Agency projects.

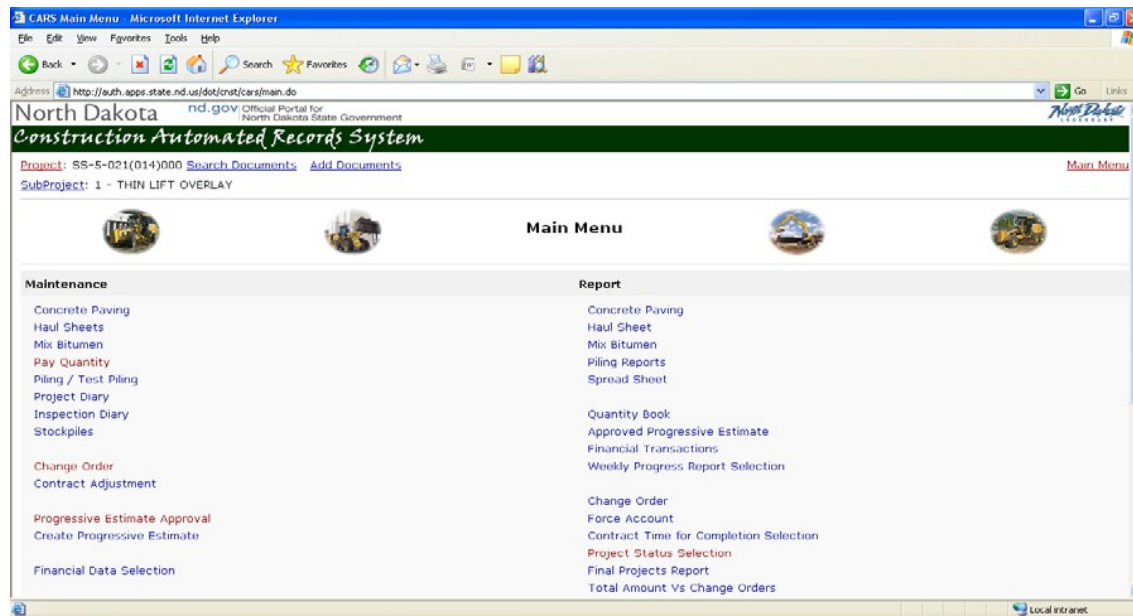
A modified version of FileNET has been incorporated with the CARS program. This will enable all users in CARS to add, search and store project records to FileNET while using the CARS program.

CARS/FileNET

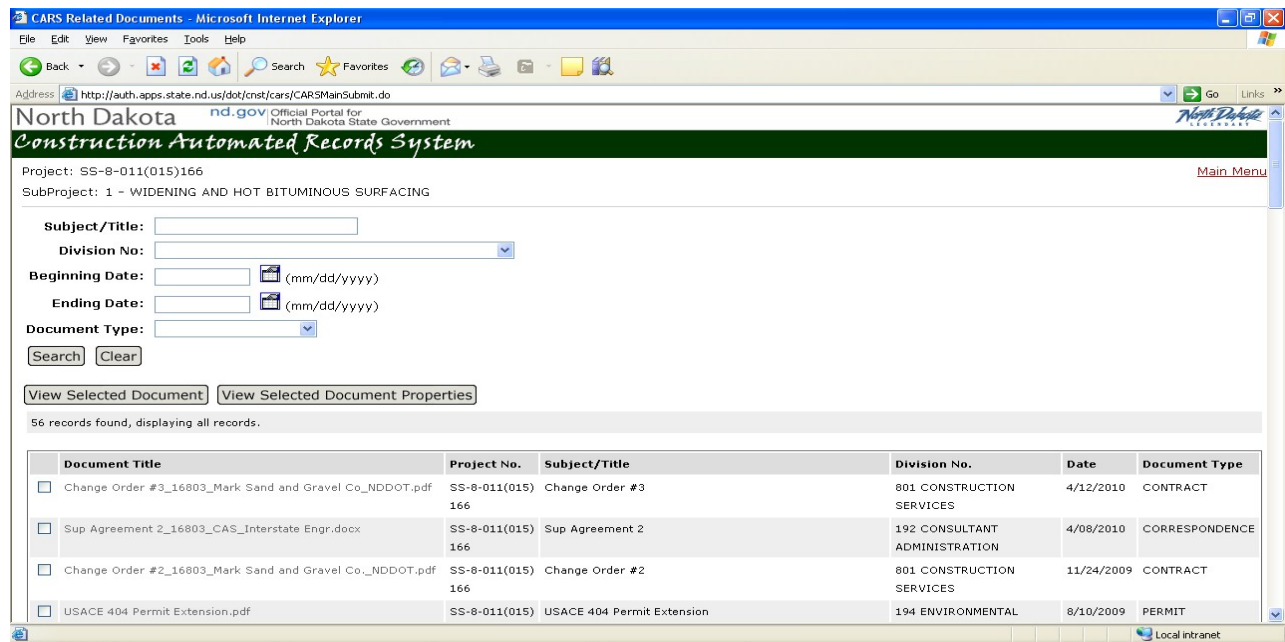
There are two new functions available on the Main Menu in CARS. They are the Search Documents link and the Add Documents link.

Search Documents Link

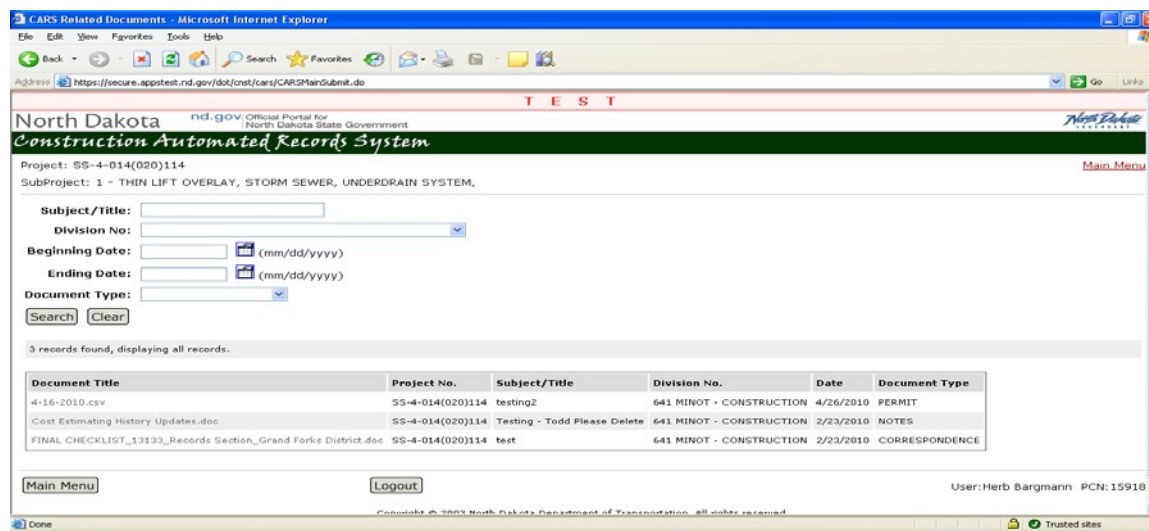
All CARS users will be able to view project related documents stored in FileNET. Project related documents from the bid opening date forward will be displayed in the new Search Documents link located on the CARS Main Menu. (see below)



Users are able to refine the search results by choosing several options. They are Subject/Title, Division Number, Beginning and Ending date, and Document Type. Users may enter one or all of the criteria to refine their search. Click the Search button to retrieve the results. NDDOT Employees -To view the documents, the user must click on the Document Title. Use the check box to select more than one document to view. Documents will open up in an Image Viewer. The screen shot below is a sample for DOT personnel only

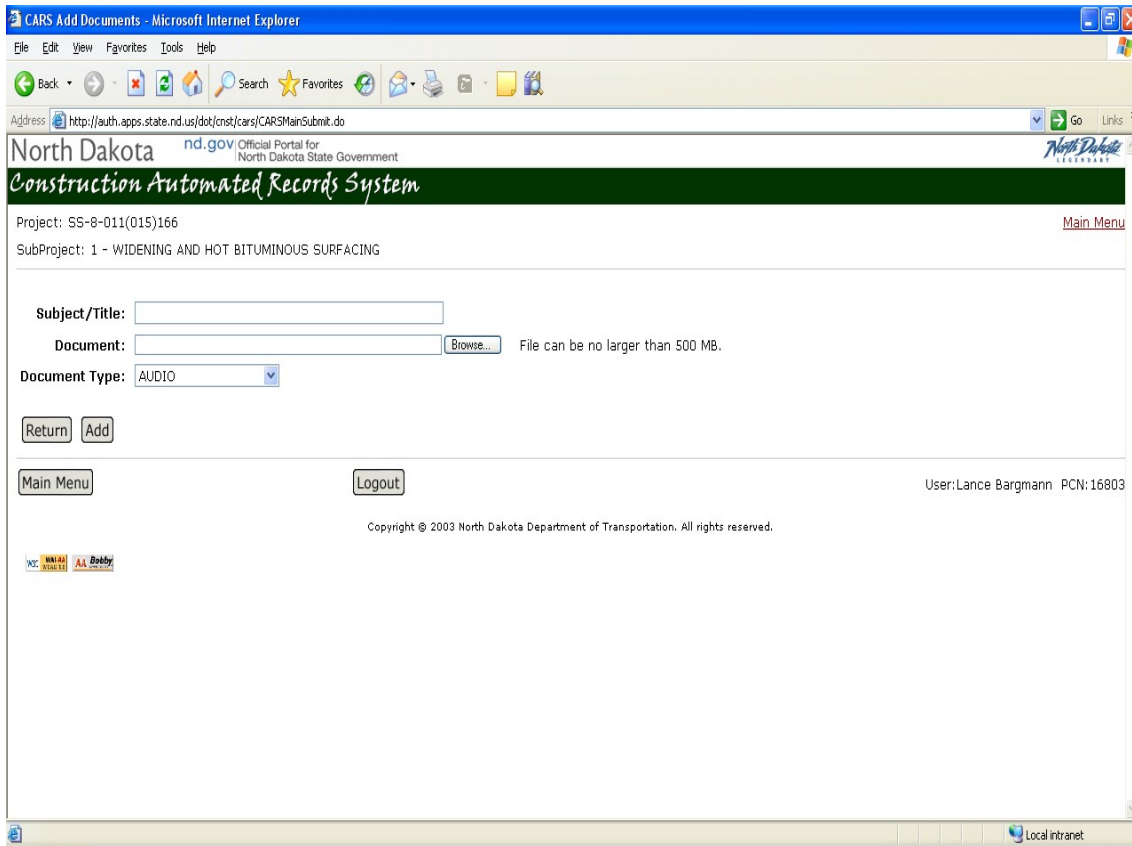


Non DOT CARS users will be able to open one document at a time by clicking the Document Title. The ability to open several documents at one time is not available. The View Selected Documents and View Selected Documents Properties boxes will not be visible. See sample below.



Add Documents Link

The Add Documents Link is where CARS users will add electronic project documents into CARS. The users will be required to give each document a Subject/Title. A document type is also required, a drop down box is available to define the document type. The users will then click the Browse button to search their PC's for the source documents location they are saving to CARS/FileNET. The final step is to click the Add button, this will store the document into CARS/FileNET. The preferred file formats are (tiff, pdf, xlsx, docx). The files should not exceed 100 mb. Once a document is added, it cannot be deleted unless the user contacts Construction Services



The screenshot shows a web browser window titled "CARS Add Documents - Microsoft Internet Explorer". The address bar shows the URL: <http://auth.apps.state.nd.us/dot/cnst/cars/CARSMainSubmit.do>. The page header includes the North Dakota State Government logo and the text "North Dakota nd.gov Official Portal for North Dakota State Government". The main heading is "Construction Automated Records System". Below this, the project information is displayed: "Project: SS-8-011(015)166" and "SubProject: 1 - WIDENING AND HOT BITUMINOUS SURFACING". The form contains the following fields and controls:

- Subject/Title:** A text input field.
- Document:** A text input field with a "Browse..." button next to it. A note below the field states "File can be no larger than 500 MB."
- Document Type:** A dropdown menu currently set to "AUDIO".
- Buttons:** "Return" and "Add" buttons are located below the form fields.
- Footer:** Includes a "Main Menu" button, a "Logout" button, and the user information "User: Lance Bargmann PCN: 16803". A copyright notice at the bottom reads "Copyright © 2003 North Dakota Department of Transportation. All rights reserved."

The Department of Transportation's retention on project records is: 3 years after FHWA final payment, then microfilm. Retain microfilm for 75 years after date filmed. To ensure that quality records are put to microfilm, the DOT recommends the following scanning standards:

1. 300 dpi
2. Tiff Group 4 compression
3. Color only if necessary (detailed maps/photos)
4. Pdf

All Project Engineers shall store the following construction project records documents in CARS/FileNET:

When scanning and storing documents in CARS/FileNET, Stamp the documents with a red star as they are processed. This will help identify documents that have been scanned.

1. **Preconstruction Meeting Minutes.** Notify Construction Services when this document is stored in CARS/FileNET either by email or (NDDOT) email with a link to the document.
2. **Correspondence.** Project correspondence, including email shall be stored in CARS/FileNET. Any documents received should be scanned and stored in CARS/FileNET in a timely manner. Do not store draft documents.
3. **Progress Reports.** This will be the original progress report with the project engineer signature and contractors signature.
4. **Inspectors Diaries.** If the CARS system is not being used to enter Inspectors Diaries, The diaries can be scanned and saved into CARS/FileNET. They should be saved in CARS/FileNET once a week per contractor/subcontractor.
5. **NOTE Project Diaries** These diaries should be in the CARS system. In some instances, when the CARS system is not being used, the diaries shall be scanned and stored in CARS/FileNET. This would be in the case of an emergency job were the project is not setup in CARS. The following criteria shall be used when scanning diaries into FileNET.
 - a. Approval from Construction Services is required
 - b. Project number must be on each page.
 - c. Legibility is not to be compromised.
 - d. Diary entries must be saved on a daily basis.
 - e. Consistency – cannot alternate CARS entries/File Net entries.

In the case of projects that are not set up in CARS, such as an emergency project, the project diaries will be scanned and stored in FileNET using the criteria listed above

6. **Piling logs.** Any piling logs that are not in the CARS system shall be scanned and stored in CARS/FileNET.
7. **Bench Mark books.** All field books used for bench marks shall be scanned and stored in CARS/FileNET.

The following are CARS/FileNET suggestions for adding these documents.

<u>Document</u>	<u>Subject/Title</u>	<u>Document Type</u>
Preconstruction Conference Correspondence Progress Report	Preconstruction Conference Subject Progress Report_weekending (Progress Report_05142010)	Correspondence Correspondence Report
Inspection Diary	Inspector_Contractor_weekending (Johnson_Gowen_07242010)	Form
Project Diary	Engineer_Project Diary_day (Johnson_Project Diary_07022010)	Form
Piling Logs Bench Mark Books	Piling Log Bench Marks	Form Field Book

The following documents will continue to be mailed to Construction Services, Construction Services will store the documents in FileNET, Hard copies of these documents WILL NOT be mailed back to project engineers. They will be available in CARS/FileNET after they have been processed.

1. Change Orders
2. Requests for Contract Time Extension
3. Requests to Sublet and Subcontract Agreements.

Final Records

All construction project records, not stored in CARs/FileNET, will continue to be sent to Construction Services as outlined in the Construction Records Manual. This includes all final paperwork required on the Final Records Checklist.

SECTION 3
PROJECT START/DIARY/PROGRESS REPORT

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CONSTRUCTION STATUS

The Change in Status is used to start, suspend or resume time charges on a project or to indicate that the project is completed.

Depending on the type of completion date shown in the bidder's proposal, time charges for a project begin on:

- ▶ The date shown on the Time for Completion page of the bidder's proposal for the project
- ▶ The proposed starting date indicated by the contractor on the Proposed Progress Chart. This chart is found in the bidder's proposal.

-OR-

- ▶ The actual date work starts on the project

Use whichever date is the earliest.

Time charges may be suspended when the contractor will not be working on the project for a prolonged period of time. Time charges are most commonly suspended for the winter months when conditions are unfavorable for project work to continue. It could also be used if time charges are started for some preliminary project work that is performed and completed and the rest of the project work will not begin for some time.

Quantities can be entered into CARS and progressive estimates can be generated when time charges are suspended. Weekly Progress Reports can not be made until time charges are resumed.

Time charges are resumed whenever the project has been in a state of suspension and the contractor starts working again.

The status of the project is changed to Completed when all work has been finished. Weekly Progress Reports cannot be made after this date but quantities can be entered and estimates can be made.

The start date entered in the Change of Status will be used to compute time charges on the Weekly Progress report. The start and completion dates are also used on the Project Time for Completion.

Paper copies and distribution of the Change in Status is no longer required. The status of a project can be viewed in CARS at any time. An email is sent to the Construction Engineer and the FHWA whenever the status of a project is changed.

Enter/Change Construction Status in CARS

To enter or change the Construction Status:

1. From the Main Menu, click on the Construction Status link. The Construction Status Selection Page is displayed.
2. Click on the Add button. The Construction Status Maintenance page is displayed.
3. In the drop down box for Status, pick if the project is Started, Suspended, Resumed or Completed.
4. Enter the date of the status change.
5. Enter remarks about the status change. Remarks are required when the project is suspended.

If project work has not started and it is necessary to process a progressive estimate to pay for items such as contract bond or stockpiled material, the construction status must be shown as Started in order to generate the estimate. After the estimate has been made, change the status to Suspended using the same date as the Started date. This must be done so the project doesn't appear on the Road Construction Map or get reported on the 511 system. When actual work starts on the project, a construction status of Resumed will be added with the date on which times charges start from the contract documents or the actual date work starts on the project, whichever is earliest.

The last change of status can be edited up until the time when the project status is changed again.

PRECONSTRUCTION CONFERENCE

Requirements for the preconstruction conference are outlined in Standard Specification 108.01 A. The purpose of the preconstruction conference is for all interested parties to review contract requirements, the construction details and proposed work schedule prior to construction.

Representatives from the following organizations are typically invited to the conference:

1. DOT
2. The prime contractor and subcontractors
3. City and/or county
4. Utility companies
5. Railroads
6. Federal Highway Administration

The project engineer will conduct the conference and keep notes on items discussed. The project engineer will send a memo summarizing items discussed to the Prime Contractor with copies to any subcontractors. Original to be put in CARS/Filenet.

Click here for a general [Preconstruction Conference Agenda Template](#)

Store this to your c:\Documents and Settings\yourusername\Application Data\Microsoft\Templates

A general outline of information to be discussed at the conference and included in the memo is listed below. Additional items may be added depending on the type of project.

1. Project number
2. Date the conference is held
3. List of those attending the conference and their organization
4. The contractor should submit their Erosion Control Plan and where applicable, their Storm Water Pollution Prevention Plan. Additional information on erosion control and the storm water pollution prevention plans can be found on the North Dakota Health Department's website at:
www.health.state.nd.us/wq/Storm/Construction/ConstructionHome.htm.
5. Discuss the contractor's safety and sanitation policy. They may submit a copy of their company policy. The discussion should include:
 - a. Basic safety requirements such as first aid kits, emergency numbers, trained personnel. The contractor's safety officer should be named.

- b. All workers within the R/W of any road eligible for federal aid to wear an ANSI/ISEA 107-2004 compliant vest
 - c. Sanitation facilities and location
6. EEO & Affirmative Action Plan/DBE Requirements
- a. The contractor may submit copies of their EEO and Affirmative Action plan
 - b. The EEO Officer will be named.
 - c. DBE participation goals will be discussed
 - d. SFN 9423 Pre-Job Conference – Equal Employment Opportunity, Labor Standards, and DBE Participation Information form will be reviewed. The prime contractor and all subcontractors present will sign the form. The original copy is sent to the Civil Rights Office. Copies will be sent along with the preconstruction conference memo to the contractor and subcontractors and a copy is retained for the project file.
 - e. Work site bulletin board and poster requirements will be discussed. Posters will be furnished for the contractor and all subcontractors.
7. The plans, specifications and construction procedures will be discussed.
- a. Specification Section 104.06 Claims for Extra Compensation
 - Discuss the Notice of Intent to File a Claim and hand out the form
 - Discuss the terms for submission
 - b. The contractor must have a superintendent on the project at all times (Section 105.02). The contractor should name their superintendent.
 - c. Discuss the submission of material certifications and shop drawings
 - The project engineer provides the contractor with a list of materials that require shop drawings or certifications
 - d. Discuss payroll procedures and submission
 - e. Railroad protective liability insurance
 - f. Procedures for requesting subcontracts
 - g. The contractor should provide a list of all subcontractors and their work description. The contractor should also provide a list of suppliers.
 - h. Discuss the contractor's starting date, work schedule and starting location
 - i. Utilities – input from utilities representatives
 - j. Field laboratory requirements
 - k. Discuss traffic control
 - Signing prior to the start of construction
 - Signing and sign maintenance during construction
 - Inclement weather
 - Name designated watch person and discuss submission of watch person logs
 - l. Structural contracts
 - Suppliers for:
 - Concrete
 - Reinforcing steel

- Structural steel
- Specified miscellaneous items
- Pile hammer specifications
- Time limitations on truck mix concrete
- Welder's certification and welder electrode certification
- Surface and special surface finish
- Deck finish and deck cure

- m. Discuss haul roads and detours
 - Inspection, maintenance, repair and release procedures
- n. Plan review and discussion
 - Review of plan notes and drawings
 - Other

Good communication between the DOT and the contractor at the preconstruction conference can get the project off to a good start. Participants need to come prepared to make worthwhile contributions to the conference. As the moderator, the project engineer must conduct the meeting in a businesslike manner while completing the scheduled agenda.

PROJECT DIARY

The project diary is used by the project engineer/manager to document daily activities on construction projects in the following categories:

- ▶ The date of the diary entry
- ▶ Days charged and days worked
- ▶ If no day is being charged, the reason for lost time
- ▶ Weather information including the time the weather readings were recorded, temperature, sky cover, humidity, wind direction and speed, and information about precipitation
- ▶ Engineering staff
- ▶ A summary of work being performed by the prime contractor and any subcontractors working on the project
- ▶ The number of people working for the contractor and any subcontractors
- ▶ A summary of equipment used by the contractor and any subcontractor
- ▶ Any project visitors
- ▶ The work hours of the contractor and any subcontractors
- ▶ A Remarks section to document any information about the project work not listed in the other sections such as any discussions with the contractor, anything unique or unusual occurring on the project, unusual conditions encountered in construction of the project, etc.

The project diary information should be recorded using the CARS diary feature.

Only the designated project engineer/manager has user rights that allow information to be entered into the CARS project diary. Other users will only have rights to view the information.

Using the Project Diary portion of the CARS programs has some distinct advantages. Filling out the Days Charged and Days Worked in the project diary will automatically fill these fields on the Weekly Progress Report. Entering information in the Lost Time Reason field for working days not charged along with the entries in the Day Charged and Days Worked fields will automatically fill the lower portion of the Contract Time for Completion report used to show days charged when liquidated damages are assessed.

Using the project diary in CARS also allows you to copy information previously entered in the various fields into subsequent days. For example, when the contractor's

equipment summary for a particular day is the same list of equipment as the day before, the CARS project diary section has a button that allows you to copy the previous day's equipment summary into the equipment summary field for the day you are entering. Also, if the equipment summary is almost the same, you can copy the previous day's summary and delete and add equipment as needed. This process can be used on any of the fields shown on the Project Diary Section Selection page.

When entering project diary information into CARS, you will notice two dates at the top of the first entry screen. The first date is the Date Created and refers to the day you are making the entries. The Diary Date refers to the actual date the documented entries occurred. Additions to the information for the diary date can be made up until midnight of the Date Created. After that, you will only be able to view the information. Additions or corrections to the diary entry can be made at a later time by using the Add Supplement button on the bottom of the Project Diary Section Selection page.

If you choose to keep the blue spiral bound paper project engineer's diary to keep field notes to aid you in entering information in the CARS project diary, the spiral bound diary should be retained in the project records as it would be considered a source document.

Enter Project Diary Information in CARS

To make entries in the project diary:

1. From the Main Menu, click on the Project Diary link. The Project Diary selection page is displayed. The last 5 diary dates will always be displayed. To display more dates, click on one of the options in the Selection Range drop down box and click on the Search button.
2. Click on the Add button to make a new diary entry. The Project Diary Days and Weather Maintenance page is displayed.
3. Enter the diary date. The date created is shown above the diary date and is the day the diary entry is actually recorded. For example, you are making a diary entry for Tuesday, August 17th but you don't enter the information until the morning of Wednesday, August 18th. In this example, the date created will show as 08/18/0000 but you would enter 08/17/0000 in the Diary Date text box. You will be able to edit the diary entry at any time on August 18th but after that you can only view the information. Any corrections or additional information must be added using a supplemental entry.
4. Enter the Day Charged and the Day Worked for the Diary Date entered. These day charges will be shown on the weekly progress report if they are entered here.
5. If you enter zero for the Day Charged, the reason for not charging a working day is entered in the Lost Time Reason text box.
6. Weather can be recorded from 1 to 3 times during the day. Time and temperature must be recorded but the other weather description choices are optional. Information for sky cover, wind direction, precipitation forecast, wind speed and precipitation intensity is entered by using the choices in the drop down

- box. All the choices available for these categories are standard descriptions used by the National Weather Service.
7. After all weather information is entered, click on Save or Save and Continue. Clicking on Save returns to the Project Diary Selection page. Clicking on Save and Continue will display the Project Diary Section Selection page.
 8. The Project Diary Selection page has links for Engineering Staff, Work in Progress, Labor Force, Equipment Summary, Project Visitors, Hours Worked and Remarks. A text box is provided in each category to enter information. A Copy Previous Day button is also provided on each page. Clicking on this button will take the information entered in the previous day's diary and put it in the text box. The information copied from the previous day can be edited or added to if needed.
 9. When all the information is entered in a single category, click on the Save button. The Project Diary Section Selection page will be displayed.
 10. Click on the View All link to display all the categories and the entries made in each.

Supplemental Project Diary Entries

When the date created date has passed, additions or corrections to the Project Diary can only be made by using the Add Supplement button.

1. From the Project Diary Selection page, click on the diary date where you want to add information. The Project Diary Days and Weather Maintenance page is displayed. Click on Continue. The Project Diary Section Selection page is displayed.
2. Click on the Add Supplement button. The Project Diary Supplement Maintenance page is displayed.
3. The diary date and the original date created are displayed along with the date of the supplement and the number assigned to the supplement.
4. A text box is provided for a short description of the supplement. This short description will be displayed after the supplement number on the Project Diary Section Selection page.
5. Enter the information for the supplement in the Supplement Text box. Click on Save. You will be returned to the Project Diary Section Selection page.

Just as with the other project diary entries, you will be able to edit the information entered in the supplement as long as it is the date created. After that, it can only be viewed. Supplemental entries will be displayed along with entries for the other diary sections with the View All link.

WEEKLY PROGRESS REPORTS

The Weekly Progress Report is used to track work progress and time charges on the project. The progress report shows the monetary amount of contract work completed and also expresses it as a percentage of the total original contract amount. The progress report shows the contract completion date along with the number of working or calendar days available. Important functions of the progress report are to show days charged and worked on a weekly basis, keep track of the total number of days charged and show the percentage of time expired.

The method used to determine time charges on construction projects is specified in the contract and can be found in the bidder's proposal for the project. The three methods of determining time charges commonly used are:

1. Working Day

The number of allowable working days is set in the contract and there is not a set completion date. The contractor is charged for only those days when the contractor is actually performing work on the project and those days when work could be performed and the contractor is not working. The contractor is not assessed a working day charge when project work cannot be accomplished for reasons such as adverse weather.

2. Completion Date

A set completion date is shown in the contract. Time charges are computed using calendar days and the contractor is charged a working day for each day of the week.

3. Completion Date with Guaranteed Working Days

The contract has a set completion date but is also allowed a guaranteed number of working days. The contractor is charged a working day for those days when actually performing contract work and for those days when work could be performed and the contractor is not working just as for a Working Day project. If the number of working days counted between the start date and the specified completion date are less than the guaranteed number, the completion date will be extended until the guaranteed number of working days have been counted.

Project time charges for working day contracts or completion date projects with guaranteed working days begin on:

- ▶ The date shown on the Time for Completion page of the bidder's proposal
- OR
- ▶ The actual date work starts on the project from the Construction Status

whichever date is earlier.

Project time charges for completion date projects begin on:

- ▶ The proposed starting date indicated by the contractor on the Proposed Progress Chart. This chart is found in the bidder's proposal.

- ▶ The actual date work starts on the project from the Construction Status

whichever date is earlier.

For detailed instructions on assessing working days and other time charges on the project, refer to Section 108.04 B and C of the Standard Specifications. You should also check the Time for Completion page in the project proposal. Some projects have additional details as to how time charges are assessed and these would supercede the methods in the Standard Specifications and the CARS program.

Days charged and days worked are entered in the boxes provided when creating the progress report. Whole days or half days may be entered. If the project engineer uses the Project Diary to enter days charged and days worked, the days will automatically be filled in on the progress report.

On contracts with tied projects, progress reports will be made for each project number on the contract. Days charged will be the same on all projects as the time charges are assessed for the contract not the project. The days worked shown may be different for each project number on the contract as the contractor may not work the same number of days on each project.

The progress report divides all contract items into work detail categories and shows the percentage of the total contract each category represents. These work details are grouped by spec and code and the number of categories shown on the progress report will depend on the work items on the project. The Work Detail Categories Chart on page 16 shows the spec/code divisions for each category. When the progress report is created, each work detail included for the project has a remarks area to enter a short description of the work being done on the items in the work detail category. For example, the project includes the work detail category for Bituminous Pavements. A remark could be entered describing the mile numbers being paved or that the contractor was paving approaches. It is not required that information be entered in the Work Details section.

The progress report also has Remarks sections. The main remarks section will be used to summarize the project work performed by the prime contractor and any subcontractors working on the project. The DBE Remarks section is used to summarize work performed by any DBE subcontractors for the week.

Construction Project Road Conditions Reporting

The project engineer is responsible for reporting on the construction road conditions on a project. This information needs to be submitted at the start of a project and updated whenever road conditions change.

The Road Info section is used to enter remarks about construction activities affecting the traveling public. This information will be used to update the State Road Construction Map on the DOT website and is not shown on the Weekly Progress Report. Information included in the Road Info section may include the following:

- ▶ The type of work taking place such as paving, milling, etc.
- ▶ The type of roadway surface the public may encounter such as gravel, seal coat, etc.
- ▶ Reduced speeds including the speed limit in mph
- ▶ Methods of traffic control including flaggers, pilot cars, detours
- ▶ If work is taking place in a specific area of the project, indicate it by mile points or reference points
- ▶ Width/height restrictions. This information should always be included. Width restriction should be shown as the width of one lane of traffic in feet. It should also be noted if there are no width restrictions.

The information in the road info section should always be current and can be updated as many times as required during the week using the Maintain link by the most recent progress report created.

When a new Weekly Progress Report is generated, the Road Info must be filled in. If it is left blank, no information will be displayed on the website map.

Submission of Weekly Progress Reports

Two copies of the Weekly Progress Report must be printed. One copy will be given to the contractor. The other copy will be signed by the contractor and the project engineer. The contractor's signature indicates that he has reviewed the time charges for the week represented by the report and is in agreement. The signed copy will be filed in the project file. No additional copies are required as the progress report can be viewed on line or printed at any time.

Create Weekly Progress Report in CARS

To create the Weekly Progress Report in CARS:

1. From the Main Menu, click on the Weekly Progress Report link. The Weekly Progress Report Maintenance Selection page is displayed.
2. To create a new weekly progress report, click on the Add New Report button. The Weekly Progress Report Maintenance page is displayed.
3. The week ending date will be displayed. A date for the week ending will be displayed or the date can be entered. When the week ending date is correct, click on the Submit button.
4. The next page displays the report number and the week ending date. The following information will be entered:
 - ▶ Days worked and days charged can be entered. If the project diary is being used to document days worked and days charged, those will be shown here and can't be edited.
 - ▶ The remarks text box is used to summarize the contractor's work activities for the week.
 - ▶ The Road Construction Map Info text box is used to enter information about construction activities affecting the traveling public.
 - ▶ The DBE Remarks text box is used to summarize work activities for any DBE contractors.
5. After this information is entered, there are two options for saving and running the report:
 - ▶ Click on the Save and Run Report button. The information is saved and the Weekly Progress Report is generated for printing.
 - ▶ Click on the Save and Continue button. The Work Details page is displayed which lists the various works item categories for the project. Each item has a text box where a short description of work activity for that category can be noted. The table at the end of this section shows the spec and code items covered in each work details category.
 - ▶ Click on the Save and Run Report. The information is saved and the Weekly Progress Report is generated for printing. You can also click on the Save button and the report can be printed later.

The most recent report can be edited until a new progress report is created. Any report can be viewed and re-printed at any time by clicking on the week ending date on the Weekly Progress Report Maintenance Selection page.

Work Detail Categories Chart

The following chart shows the spec and code ranges associated with the work detail categories shown on the weekly progress report.

DESCRIPTION	BEG SPEC	END SPEC
General Provisions	100	199
Removals & Earthwork	200	299
Bases	300	399
Bituminous Pavements	400	499
Concrete Pavements	500	599
Structures	600	699
Drainage	714	714
Guardrail	764	764
Erosion Control	708	709
Mobilization & Traffic Control	702	702
	704	704
	710	710
	762	762
Concrete Work	748	748
	750	750
Water & Sewer	722	722
	724	724
	744	744
Misc.	706	706
	720	720
Signing, Lighting, Signals	754	754
	770	770
	772	772
900 Provisions	900	999

Tracking Project Permits in CARS

Many construction projects require permits from various state and/or federal agencies. These permits must be maintained until the activity that they cover is completed. Once these activities have been completed, the permits must be terminated. This CARS module is used to track the status of all project permits.

Three main permit types have been established in the system. One is the Construction General Permit issued by the North Dakota Department of Health (NDDoH) for non-tribal lands. The second is the Construction General Permit issued by the United States Environmental Protection Agency (EPA) for tribal lands. The third is the 404 Permit issued by United States Army Corps of Engineers (USACE).

Once a permit is received for a project, the Project Engineer shall enter the applicable permit information into CARS. For projects that are located inside tribal lands, the EPA permit will be required. If the project is on both tribal and non-tribal lands both the NDDoH and EPA permits will be required. The permits must be recorded separately. Once the permitted activity (land disturbance or impacts to waters of the U.S.) is completed, the Project Engineer should terminate the permit according to the instructions contained on each individual permit.

Before terminating a Construction General Permit, the Project Engineer must conduct a field review and fill out **Form SFN60504 Stormwater Permit Termination Field Review Checklist**. This form must be signed and added to the project record in CARS using the add documents link. The Project Engineer would then update the termination date in the CARS permit module as the date the Notice of Termination or 404 permit certification was submitted. When a letter of termination from a state and/or federal agency is received, this should be documented in the comments section including the date of the letter and the letter should be uploaded to Filenet.

The final checklist in CARS asks if all appropriate permits have been terminated in CARS. If permits have been entered, the Project Engineer should ensure all permits have been terminated before checking this item. If there are no permits associated with the project, no permits should be entered into the CARS permit module.

To Add/Maintain/Delete a Permit in CARS:

1. From the Main Menu, click on the Project Permits link. The Project Permits View page is displayed.
2. To add a new permit, click on the Add button. The Project Permit Add page is displayed.
3. Enter the Permit ID (permit number), Select the Permit Type from the drop down menu, and enter the Permit Expiration Date. Comments can be added but are limited to 250 characters. Also, if the permit has already been terminated, enter the termination date.
4. If the permit covers more than one PCN, enter the additional PCNs in the "Other Projects covered by PCNs" fields. If more than two PCNs need to be entered hit the Add button to create more fields.

5. When all required data has been entered, hit the Save button.
6. Permit Type, Expiration Date, Termination Date, Comments and associated PCNs can be edited using the Maintenance page. This page is accessible from the "Maint" link on the Project Permits View page. **NOTE:** Before terminating a Construction General Permit, the Project Engineer must conduct a field review and fill out Form SFN60504 Stormwater Permit Termination Field Review Checklist. This form must be signed and placed in the project record.
7. If a permit was entered into the system by mistake, District or Assistant District Engineers can delete permits from the project using the Maintenance Page. Click the "Maint" link on the Project Permits View page and check the box under Delete next to the permit to be deleted. Hit Save. The permit should be deleted from that project and all associated projects.

To Search Open/Closed Permits in CARS:

1. From the Main Menu, click on the Open Permits link under the Management Reports Heading. The Open Permits Reports page is displayed.
2. Enter any of the search criteria and hit Search. The results should be displayed for both open and closed permits.
3. The results of the search can be exported by clicking on one of the export options at the bottom of the results.

View Contractor Information for a Permit in CARS:

1. From the Project permits Maintenance page or the Open Permits Report page, click the Contractor Name on a permit. The Contractor Contact Information is displayed.

Vertical Clearance Change Records

Any changes to vertical clearances above highways will be included in the final records. These changes may be due to paving overlays or reconstruction under bridges and sign structures or bridge deck overlays on trusses. The new measurements are recorded in CARS and Bridge Division will record the changes into the Bridge Management database for use in the Automated Routing Program and by the Highway Patrol Permitting Office.

The section in CARS must be filled out before the project can be finalized but the clearances should be recorded as soon as practical after the construction is complete and before the roadway is opened to traffic. Screen shots of this section can be found at the end of this section.

Many projects will have no effect on the vertical clearance. Striping, guardrail, chip seal, are just a few of the type of projects that will not affect the vertical clearance under a structure. If the clearance is not affected, select Not Affected on the initial page and the input is complete.

1. To record the change to the Vertical Clearance
 - a. Click on the Vertical Clearance link on the left side of the beginning page.
 - b. The Vertical Clearance page is displayed:
 - (1) Choose either Maint or Not Affected for a bridge from the list
 - (2) If Maint (maintain the Vertical Clearance) is selected
 - a) Select Yes in clearance affected.
 - b) Select type of overhead obstruction from dropdown
 - c) Enter Beam Face Direction while looking up station
 - d) Enter Date from dropdown
 - e) Enter inspector's name
 - f) Enter measured clearances at shoulder and edges of lanes in feet and inches to the nearest 0.25"
 - g) Select Save when all measurements or "Not Affected" lines are complete.
 - (3) If Not Affected is selected no more inputs are required for that particular bridge.
 - (4) Complete for all bridges on list
 - (5) If not all affected bridges are listed, contact Bridge Division 328-4844 to have the bridges added to the CARS Module.

Initial input of bridges will be done by designers during the final estimate process. If the designer determines type of project provides no bridge vertical clearances will be affected, no bridges will be entered. If there is a possibility to affect vertical clearances, bridges will be entered which are automatically pulled into Pacer and then CARS and the decision if a vertical clearance is affected will be made in the field by the construction observation team.

If the project is a consultant design, Local Government will input any bridges that may be affected in Pacer prior to the information being transferred into CARS.

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PAY QUANTITIES

Contract items not documented for payment on a mix bitumen report, haul sheet, concrete paving report or piling/test piling report are recorded on SFN 10004 Pay Quantity Report. The pay quantity report information will be added to CARS using the Pay Quantity portion on the Maintenance side of the Main Menu. The Pay Quantity Report comes in booklet form with duplicate copies for each report. The original copy is submitted to the project engineer and becomes part of the project records. The duplicate copy is retained by the inspector.

Only one bid item per funding source should be documented on the pay quantity report. For example, the project you are working on has two subprojects and quantities for Traffic Control Signs are shown in each subproject. The contractor places the construction signing resulting in quantities for traffic control signs in each subproject. This would be documented on two pay quantity reports, one for each subproject. The date shown on the pay quantity report should be used when entering the report into CARS so the report dates and the dates displayed in the Quantity Book match.

The pay quantity reports should be separated and filed in spec and code order. The reports will be filed in date order within the spec/code section. When a project has more than one subproject, keep separate files for each subproject. The detail sheets from the progressive estimates can be used as a guide for subproject divisions and the spec and code order of the contract pay items. Filing the pay reports in this manner makes it much easier to verify quantities for final preparation and checking.

Documentation of certain pay quantities requires obtaining the contractor's signature on the pay quantity reports. They are:

1. Flagging
2. Pilot Car
3. Water
4. Excavation quantities documented by field measurements such as subcuts
5. Rock excavation not measured by cross sections
6. Items measured in place such as foundation fill or select backfill, if using measurements greater than plan dimensions
7. Any material paid for by load count

If the measurements and computations are being kept in a field book with only the summary of quantities documented on the pay quantity report, the contractor should review and sign the field book. For water and material paid by load count, the contractor should also review and sign the inspector's measurements and computation for the hauling unit capacity.

The purpose of obtaining the signature is to give the contractor an opportunity to review the measurements and signify agreement with the pay quantity documented.

Standard methods of documentation of pay quantities should be used. At a minimum, document the location and quantity of each pay item recorded on the pay quantity report. Any additional information documented for the pay quantities will only be beneficial. When quantities are measured in the field, make sure the measurements are shown clearly and show all calculations for the quantities submitted for payment. The following list details methods of measurement and documentation for general categories of pay items.

Contract Bond

Contract bond will be paid based on the receipted invoice submitted by the contractor along with a letter requesting payment. If the premium paid by the contractor is less than the original lump sum bid price, only the percentage represented by the invoice amount will be paid on intermediate and semi-final estimates. For example:

The invoice amount submitted by the contractor is \$4,500.00
 The original bid amount is \$5000.00
 Pay for 0.90 LS

The remainder of the original lump sum bid price remains unpaid until the final estimate. If the invoice amount submitted by the contractor is equal to or more than the original lump sum bid price, only the bid price will be paid.

Mobilization

Mobilization will be paid on the percentage of the original contract earned. The dollar amount paid will be the percentage of the mobilization bid price or the percentage of the original contract amount, whichever is less. These payments are made according to the following chart.

Amount Earned of the Total Contract	Mobilization Bid Amount	Pay the lesser of: Total Contract Amount
5%	25%	2 ½%
10%	50%	5%
50%	100%	7 ½%
75%	100%	10%

Aggregates

Aggregates are generally paid by the ton. Weigh tickets are made and are summarized on CARS generated haul sheets or those produced by the contractor’s scale. Small tonnages may be recorded on a pay quantity report and the tickets must be attached to the report. Aggregates are sometimes measured by the square yard or cubic yard and will be measured in place. All field measurements must be recorded on the pay report or kept in a field book. All calculations for the quantities must be shown.

Asphalt for Prime, Tack or Seal Coat

A field book will be kept to document distributor shots. Shot records are used to determine application rates and can be used as an estimated quantity. Quantities will be based on manifest quantities. Final quantities are based on the gallons delivered minus any quantities used for other purposes such as waste or private use. The total quantity from manifests should be equal to or greater than the total quantity in the shot record. On some projects like those in an urban setting, quantities will be determined by shot record only as the contractor’s equipment is serving multiple projects. A manifest for the asphalt material applied to the project must still be collected for testing purposes.

Asphalt for Bituminous Mixes

Asphalt used in hot bituminous mixes is paid for by the ton. Daily estimated amounts are calculated on the Mix Bitumen Report which is also used to determine the percentage of asphalt in the mix. Quantities are based on the manifest tons. Final quantities are based on the tons delivered minus any quantities used for other purposes such as waste or private use. Sometimes hot mix is supplied from a commercial plant that is serving many other customers. In this case, the quantity determined from the mix bitumen report will be used. Manifests covering the material used on the project must still be collected for testing purposes.

Reinforcing Steel

A record of all reinforcement bars placed in a structure is kept and signed by the inspector present at the time of placement. These records are generally kept in a field book listing the number, size and length of each type of bar installed and separated by portion of the structure. The quantities are summarized on a pay quantity report as portions of the structure are completed for entry in the quantity book.

Subgrade Preparation

Subgrade preparation will be measured by the number of miles or square yards prepared and accepted. Document field measurements and calculations on the pay quantity report.

Water

Water will be measured and paid by the 'M' gallon. The 'M' gallons of the hauling units will be calculated and must not exceed the licensed legal load for the hauling unit. Quantities are determined by a count of the loads hauled and placed multiplied by the 'M' gallon capacity of the water hauling unit. The contractor will sign each days load counts along with the 'M' gallon calculations for each hauling unit.

Excavation and Borrow

Excavation and borrow quantities may be recorded as estimated amounts until actual computations are made. Excavation and borrow quantities are determined by cross sections. Common excavation areas include topsoil. The topsoil quantity must be subtracted from the common excavation quantity and paid separately. The field notes will be plotted, bugged and computed or may be determined using a computer earthwork program. Hand plotted cross sections and earthwork computations should be checked in depth at the District level and submitted to Construction Services for checking prior to submission of the final. Earthwork computations computed using a program similar to RoadRunner will be submitted along with the field notes to be spot checked. Earthwork computations calculated using Geopak do not have to be submitted for checking prior to submitting final records.

Roadway Obliteration

Locations and field measured quantities for obliteration will be recorded on the pay quantity report. Show any calculations for the quantities.

Loose Rock Riprap

Riprap quantities are generally paid by the cubic yard and are determined by load counts or are measured in place. For load counts, determine the cubic yard capacity of the hauling unit. The cubic yard capacity of the truck should not exceed the licensed legal load. Document the calculations on a pay quantity report or in the inspector's diary. If the calculations are shown on the inspector's diary, note the location of the calculation on the pay quantity reports. The contractor must sign the report showing the load calculations. Record the load counts on a pay quantity report or in a field book. The contractor should also sign each day's load counts. If the riprap is paid by the cubic yard in place, measure the length and width of the area. Take random depth checks along the placement area to determine an average depth. Show all measurements and calculations for the pay quantity.

Seeding and Sodding

Seeding and sodding will be paid by actual field measurements of the placement areas. Show all measurements and calculations for the pay quantity.

Pipe

Payment of pipe will be the actual field measurements of pipe placed. Pay quantity reports should also include information such as heat numbers or inspection stamps.

Non-Structural Concrete

Concrete construction will generally be paid for by the linear foot or square yard. These items will be field measured and drawings will be shown on the pay quantity report or in a field book. Computations must

be shown for all quantities. Concrete paving quantities may also be determined by using the Concrete Paving Report.

Structural Concrete

All concrete pours will be recorded. The total yards used in each portion of the structure will be recorded in the inspector's diary or a separate field book. Tickets will be produced at the concrete plant and will be kept in the project records. The pay quantity for each portion of the structure will be 'plan quantity' unless it is determined that the plans are in error or a change in design has been made.

Miscellaneous Items

Items should be documented showing the location and amount being paid. If an additional quantity of an item was added and was not shown on the plans, it should also be noted on the pay quantity report. Lump sum quantities will be paid as a percentage of the work complete and the pay quantity report should include documentation supporting the amount of the lump sum work completed.

Always check any calculations on pay quantity reports before entering the quantities into CARS.

Enter Pay Quantities in CARS

To enter pay quantities into CARS:

1. Click on the Pay Quantity link on the main menu. The Pay Quantity selection page is displayed. Pay quantities are listed in ascending order by spec and code including change order items.
2. Click on the Add link by the pay quantity to be entered. The Pay Quantity Maintenance page for that item is displayed.
3. Enter the information for the pay quantity
 - a. Enter the date from the pay quantity report or from whatever source document is being used.
 - b. Use the drop down box to enter the type of source document for the pay quantity
 - c. If the quantity being entered is from a change order, use the Change Order drop down to pick the change order information.
 - d. The Contractor Approved radio buttons can be used for items such as water or flagging hours that require the contractor's signature.
 - e. The Remarks text box is used to enter any comments about the pay item.
 - f. Under locations, enter the quantity for the item documented and its location. Four quantity and location text boxes are provided but more can be added by pressing the Add Quantity Row button.
4. Click the Save button. If additional days will be entered for the item, click on the Save and Add New Button. This will save the information entered and bring up a blank page.

If you have entered multiple locations in the text boxes provided, only the first entry will be displayed in the quantity book. If you want the individual locations to be displayed in the quantity book, enter information in the first quantity and location text boxes and click on the Save and Add New button.

A quantity entry can be edited until it is paid on the progressive estimate or as long as the release flag is an R or an E. To edit a pay quantity:

1. Click on the Maint link by the pay item to be edited.
2. Pick the date of the entry to be edited. All date entries made for the items are listed in descending order with the most recent entry at the top of the list.
3. The pay quantity to be edited is displayed. Edit the information by changing the data in the text boxes, adding an entry by clicking on the Add More Rows button, or by deleting one of the quantity/locations rows by clicking in the Delete check box.
4. Click on the Save button to save the corrected entry.

The entire entry can be deleted by clicking on the delete button at the bottom of the page. A box will pop up that asks if you really want to delete the item. If so, click OK. The item will be deleted and you will return to the Pay Quantity Record Selection page for that item.

Only entries made through the Pay Quantity items will be displayed on the Record selection page. If the pay quantity was generated by a haul sheet, mix bitumen report, concrete paving report or piling/test piling report, it will be displayed in the maintenance for those reports. The quantity book should be used to see all quantities entered for a pay item.

PILING/TEST PILING

Piling reports are used to record pile driving data, calculate bearing values and document pay lengths for both test pile and foundation piling. Section 622 of the Standard Specifications contains complete information for the inspection of piling and test piling.

Before piling or test piling information is entered in CARS, you will enter the bridge number and station for each structure on the project. Next, you will enter the hammer information for each driving unit used on the project. This information is obtained from the manufacturer's specification sheet submitted by the contractor.

The following is a list of some common terminology used in piling/test piling documentation and calculation:

Rated Energy This is the manufacturer's rated energy in foot/lbs. Some reductions may apply and are listed in the Standard Specifications.

Weight of Striking Parts This refers to the ram weight in pounds. This weight is used in the bearing calculations.

Rated Stroke This is the manufacturer's rated stroke of the hammer in feet.

Rated Speed This is the manufacturer's rated speed in blows per minute.

Average Observed Speed The observed speed in blows per minute from the inspector's documentation

Type of Cap/Cushion Refers to the type of material used for these parts of the hammer

Cap Weight The weight of the cap in pounds from the hammer manufacturer's specifications. This weight is used in the bearing calculations.

Anvil Weight The weight of the anvil in pounds from the manufacturer's specifications. This weight is used in the bearing calculations.

Adapter Weight The weight of the adapter in pounds from the manufacturer's specifications. This weight is used in the bearing calculations.

Hammer Stroke This is the stroke in feet from the field documentation or the manufacturer's rating.

Blows per Minute Refers to the observed blows per minute recorded in the field documentation by the inspector

Energy This is the observed energy from field documentation and is recorded in foot/pounds.

Number of Blows The number of blows counted as final penetration is being taken for bearing.

Inches Penetration Full penetration of the pile during the final check. Recorded to the nearest hundredth of an inch.

The 'M' value in the pile formula is the combined weight of the pile, the driving head and the hammer anvil.

Information for design load, plan length of test pile and pile type is found in the project plans. The weight per foot of steel piling is found in the size designation for the piling. For example, the bid item Steel Piling HP 14 x 73 indicates that the piling weighs 73 pounds per linear foot. The weight of the piling is also used in the bearing calculations.

Test Piling

A Test Pile Log is completed for each test pile driven for the structure. The plans will show the test pile number, location and minimum required bearing. Information needed to compute the bearing for the test pile is recorded in a field book by the inspector.

Bearing values are computed according to the applicable formula found in the Standard Specifications. 'Obs. Stroke' applies to single acting hammers and 'Feet of Drop' applies to gravity type hammers. The value for "M" in the piling formula is the combined weight of the pile, driving head and hammer anvil (lbs.) and represents the total weight of the 'driven' parts.

When computing the average penetration, before obtaining 50% of the design load, it is not necessary to count the total number of blows between each 5 feet of penetration, but rather count the number of blows required to penetrate the last foot of penetration.

When 50% of the design load is obtained, bearing must be computed for every foot of penetration even if the bearing drops below 50% of the design load. This is the distance below the bottom of the footing where 50% of the design load is first obtained and bearing readings begin. This distance is used to compute bearing for each foot for the test pile report. Use special attention to insure the accuracy of this entry.

The inspector records the following information in the field documentation for test piling:

1. The substructure unit and number i.e. pier or abutment number
2. Piling number
3. Date, start and stop time
4. The reading starting point
5. The number of piling and cutoff, if any, for each pile length
6. Penetration data including stroke, energy, blows, penetration in inches and the pile length number for that reading

Data recorded in the field inspector's log for test piling is entered into CARS. The bearing calculations are made and the test piling pay quantity is sent to the quantity book. Only the plan length for test piling as entered on the Test Piling Maintenance page will be sent to the quantity book. Any test piling driven in excess of the plan length will be paid at the contract unit prices for piling. Document the excess quantity on a pay item report and enter it in the Pay Quantity portion of CARS.

Piling

A log of pile driving is completed for all abutment and pier piling. The project plans show details of piling locations, numbers for each substructure unit, pile type and design loads.

The inspector records the following information for each piling driven:

1. The substructure unit and piling number
2. Hammer stroke
3. Blows per minute
4. Energy in foot/lbs

5. Number of blows
6. Each pile length installed and any footage cut off of the pile length
7. Final Add On. When piling has been driven to the required penetration and bearing, there may not be sufficient length of piling to extend into the footing. A length of piling is welded on and shown as the final add on quantity. This length of piling is part of the pay length but is not used in the bearing calculations.

The data recorded in the inspector's field book will be entered in the Piling Maintenance section of CARS. The average penetration and bearing will be calculated. The pay length of piling driven will also be calculated and sent to the quantity book.

Before entering any piling or test piling data, you will need to enter the structure and hammer data. From the Main Menu, click on the Piling/Test Piling link. A list of the types of piling and test piling for the project will be displayed. Below the list are buttons for Structure and Hammer.

Enter Structure Information in CARS

To enter structure information:

1. Click on the Structure button. The Structure Maintenance page is displayed.
2. Make sure the correct subproject is shown at the top of the page and click on the Add button. Enter the bridge number and station in the text boxes provided. If there is more than one structure, click on the Add button. Click on the Save button. This information will appear in the Structure drop down list in the Piling and Test Piling pages.
3. To delete a structure in the list, click the check box in the Delete column by the structure information to be deleted and click on the Save button. The information is deleted and will no longer appear in the structure drop down list in the Piling and Test Piling pages.

Make sure the correct subproject is shown when entering the structure information.

Enter Hammer Information in CARS

To enter hammer information:

1. Click on the Hammer button
2. Click on the Add button. The Hammer Maintenance page is displayed.
3. Enter information for the cap, cushion and hammer type using the choices provided in the drop down boxes.
4. Enter the remaining hammer information in the text boxes shown and click on the Save button. This information will appear in the Hammer drop down list in the Piling and Test Piling pages.

Enter Test Piling Information in CARS

For test piling:

1. Click on the Add link by the test piling spec and code.
2. Pick the structure location from the choices in the drop down box.
3. Enter the pier or abutment number, the pile number, date and start and stop time in the text boxes.
4. Pick the hammer being used from the choices in the drop down box.
5. Enter the pile weight, design load, plan length and the start point reading in the text boxes. A text box is also provided for remarks if there would be any special comments to make.
6. Enter the Pile Length information and Penetration Data. To add additional rows, type the number of readings in the text box and click on the Add Penetration Row button.
7. When all the test pile information has been entered, click on the Save button or the Save and Run Report button.

Enter Piling Information in CARS

For piling reports:

1. Click on the Add link by the piling spec and code.
2. Pick the structure location from the choices in the drop down box.
3. Enter the pier or abutment number, the pile number and date in the text boxes.
4. Pick the hammer being used from the choices in the drop down box.
5. Enter the piling weight, required penetration and required bearing.
6. Enter the pile length added after bearing was reached, if any.
7. Enter the hammer stroke, blows/minute, energy, number of blows and penetration in inches.
8. Enter the pile lengths driven and any cutoff footage. If more than four length and cutoff entries are needed, click on the Add Pile Row button.
9. Click on either the Save or Save and Add New button if there are more piling to enter for that part of the structure.

Clicking on the Save and Add New button will bring up the same information as the first piling entered except that the piling number and pile lengths text boxes will be blank. When the information for all piling for that report is entered, click on either the Save or Save and Run Report button. The Piling Record Selection Page will display each piling separately but will produce the report based on the date driven and the pier/abutment number. For example, if you have driven piles 1, 2 and 3 for abutment #1 and pile 1 for pier #2 on the same day, separate reports will be made for abutment #1 and pier #2.

After the report has been saved, the data can be edited or deleted as long as the quantity has not been paid on an estimate.

1. Click on the Mtce link by the test piling or piling spec and code.
2. Click on the bridge number by the date of test piling or piling report to edit.
3. Enter corrected information in any of the text boxes.
4. An entire row of penetration data can be deleted by clicking in the check box in the delete column for that row. In the piling report, only the last row of pile length can be deleted at one time.
5. The entire test piling or piling report can be deleted by clicking on the Delete button on the Test Piling or Piling Maintenance page.

Payment for test piling and piling is usually made at the contract unit prices for lengths of piling installed. Sometimes, adjustments to the payments for piling are made for circumstances such as underruns/overruns or piling splices. Refer to Section 622.06 Basis of Payment of the Standard Specifications for details of these types of payments.

Copies of the piling and test piling reports will be printed with one copy for the contractor and the second copy forwarded to the Bridge Division. On the back of the copy sent to the Bridge Division, make a drawing of the substructure unit and number. Show the pile locations in the substructure and indicate those driven for that report. Also indicate where 'North' is in relation to the substructure location.

MIX BITUMEN REPORTS

The mix bitumen report is used to calculate the estimated pay quantity of oil for a day's hot bituminous paving and to establish the percentage of oil in the mix.

When paving begins, some bituminous material may already be stored in the tanks supplying oil to the hot mix plant. This quantity is measured and recorded for the first mix bitumen report on a project. On subsequent days of paving, the bitumen in storage at the beginning of the day's paving is usually the quantity recorded as left in storage from the previous day. Sometimes, there is a break in paving from a particular plant to work on other projects. In these cases, the oil tanks supplying the hot mix plant will have to be re-measured. When the hot mix is being supplied from a commercial operation, it may be necessary to measure the tanks at the beginning of each day of paving. Commercial operations supply mix to many customers so the oil tank quantities are measured for those hours when mix is supplied to your project.

Any oil delivered by transport and used in the day's paving is also recorded on the mix bitumen report. The manifests for each load of oil delivered are collected and become a part of the project records.

The oil tanks are measured again at the end of a day's paving to record and calculate the quantity of oil left in storage.

The bitumen in storage at the beginning and end of each report are calculated by correcting the volume for temperature, multiplying by the specific gravity and dividing by 2,000 to obtain the quantity in tons. The bitumen delivered is recorded in pounds and converted to tons. The amount of bitumen used for a day's paving is calculated by adding the bitumen in storage and bitumen delivered then subtracting the bitumen left in storage. If any bitumen was used for purposes other than paving such as tack or fog coat, the gallons used are converted to tons and are also subtracted. The result is then divided by the total tons produced from the plant for the day's paving to obtain the percent of oil in the mix. The oil quantity for mix produced but not used on the project (waste, private use, etc.) is multiplied by the oil percentage and those tons are subtracted from the quantity of bitumen for all mix produced. This result is the estimated pay quantity for the bitumen used on the project.

When this information is entered in the Mix Bitumen portion of CARS and saved, it will send the estimated pay quantity to the quantity book.

When paving is complete on the project, you will make an oil summary to check the quantity. An oil summary lists all bitumen delivered to the project from the manifests. Add the quantity for oil in storage at the beginning of the project. Oil quantities from non-project mix (waste, private use, etc.) along with any material left in storage when paving is complete is subtracted. The result of these computations is the total oil quantity for the project.

Enter Mix Bitumen Information in CARS

To make a Mix Bitumen Report in CARS:

1. Make sure the Project and Subproject are correct.
2. Click on the Mix Bitumen link. The Mix Bitumen page is displayed.
3. Select the type of oil for the report by clicking on the Add link. Goes to the Mix Bitumen Maintenance page.
4. Enter the information for fields in the Mix Bitumen report:
 - a. Date, begin and end time.
 - b. The change order drop down box will have a default of 'None' if no change orders apply to the material hauled. If the material is affected by a change order, the change order number, date of the change order, quantity and unit price will be display in the change order drop down box. This can be left in the drop down or the 'None' option can be chosen.
 - c. Enter the haul sheet or pay quantity tonnage for that day's paving.

- d. Add the specific gravity from the oil manifest.
 - e. Enter the waste amount in gallons for any oil used for purposes other than in the hot bituminous pavement.
 - f. Enter any waste tonnage. This includes plant waste, road waste, private use, tons of pavement going to another project or any other pavement quantities that were not placed on the project.
 - g. Enter any remarks. This can include information about plant shut downs during the day or the types and tonnages of waste.
 - h. Enter the bitumen in storage. The beginning and ending gallons and beginning and ending temperatures for each tank are entered on one line. If you would need to enter more tanks than the four lines provide for click on the Add Storage Row button. Also, the ending storage and temperature readings from the previous day's report will automatically be filled in. If there has been a break in the paving on the project, that quantity and temperature can be changed by clicking in the text box and typing the new numbers.
 - i. Enter the bitumen delivered. Enter the manifest number and the net weight in pounds for each load of oil delivered. A remarks line is also provided if needed. To add more lines for loads delivered, click on the Add Delivered Row.
5. Click on the Save or the Save and Run Report button.

Data entered in the mix bitumen report can be edited or the entire report can be deleted as long as there is an 'R' or an 'E' in the release flag column. After the oil quantity has been paid on a progressive estimate, the report can only be viewed and/or printed

To edit or delete a mix bitumen report:

1. Click on the Mix Bitumen link. The page listing the types of material is displayed.
2. Click on the Maint link by the material used. The Mix Bitumen Record selection page is displayed where all reports for that item are listed in ascending date order.
3. Click on the date link for the mix bitumen report to edit or delete.
 - a. To edit the report, change any incorrect data and click on the Save or the Save and Run report button.
 - b. To delete the report, click on the delete button at the bottom of the page. A dialog box that confirms if the report should be deleted appears. If it should be deleted, click OK.

CONCRETE PAVING

The concrete paving report is used to record and calculate concrete design and paving information. It also calculates the square yards paved and sends it to the quantity book.

Enter Concrete Paving Information in CARS

To make a concrete paving report in CARS:

1. Click on Concrete Paving link. The page listing the types of concrete pavement on the project is displayed.
2. Select the type of pavement by clicking on the Add link. The page to enter data for the paving report is displayed.
3. Enter the mix design data, any additional square yards paved and any remarks.
4. Enter the start and end time, start and end stations and any minutes of delay.
 - a. The linear distance will be computed automatically from the numbers entered in the start and end stations. Remember to enter the stations as a whole numbers without the plus, for example; 14+00 would be entered as 1400, 8+56.82 would be entered as 856.82. If there is an equation within the area paved, you will make two entries for the linear distance computations. Enter the start station for that day's paving and enter the back station for the end station. Make a second entry with the ahead station for the start stationing and then enter the end station for that day's paving.
 - b. If additional paving stations are required, click on the Add Blank Station Row button.
5. Save the data by clicking on either the Save or Save and Run Report button.
 - a. Clicking on the Save button, saves your data. A report can be generated later.
 - b. Clicking on the Save and Run Report button, saves the data and generates the report.

The concrete paving report includes a text box where additional square yards paved can be added. This is for small areas placed without the paving machine but included in the plant quantities produced for that day's paving. These quantities are field measured and the square yards calculated. These measurements and calculations could be recorded in the remarks section if space allows. If not, record the measurements and calculations in a field book and make note of where the calculations can be found. Field measurement and calculations may also be attached to the paving report.

A copy of the paving report may be given to the contractor. A copy can also be made and filed in the project records but is not required as the report can be accessed on line at any time after it has been saved.

To view and/or print a previous concrete paving report:

1. Click on the Concrete Paving link. The page listing the types of concrete pavement on the project is displayed.
2. Click on the Maint link by the type of concrete pavement. The Concrete Paving Record selection page is displayed where all reports for that item are listed in ascending date order.
3. Click on the Report link for the concrete paving report to be viewed and/or printed. The report is generated.

Data entered in the concrete paving report can be edited or the entire paving report can be deleted as long as there is an 'R' or an 'E' in the release flag column. After the concrete quantity has been paid on a progressive estimate, the report can only be viewed and/or printed.

To edit or delete a concrete paving report:

1. Click on the Concrete Paving link. The page listing the types of concrete pavement is displayed.
2. Click on the Maint link by the type of concrete pavement. The Concrete Paving Record selection page is displayed where all reports for that item are listed in ascending date order.
3. Click on the date link for the concrete paving report to edit or delete.
 - a. To edit the report, change any incorrect data and click on the Save button.
 - b. To delete the report, click on the delete button at the bottom of the page. A dialog box appears to confirm if the report should be deleted. If it should be deleted, click OK.

Weighed Materials

Most pay items for material measured by the ton and delivered to the roadway by truck are weighed and documented on a weigh ticket. These tickets are summarized daily and added to the project records as a daily haul summary.

Weighing Procedures

Materials measured and paid for by weight shall be weighed on an approved scale.

The Contractor shall provide a person to operate the scale, issue weigh tickets, perform scale verifications, and prepare reports.

Scales – Scales shall:

1. Be certified by a scale service company registered with the North Dakota Public Service Commission. The certification must have been done within 6 months prior to use on the project.
2. Be accurate to within 1.0 percent of the true weight of the applied load throughout the range of use;

The Engineer shall verify the scale's accuracy by observing and documenting the contractor check the scale before the first use and as often as the engineer deems necessary. If the scale is not within the required tolerance the scale will be recertified by a registered scale service company before allowing it to be used on the project.

Scales are verified using four (4) tests:

1. Zero Load Test
2. Comparison Test
3. Sensitivity Test
4. Shift Test

Refer to the specifications to determine which certification tests apply to each type of scale.

The results of the scale verification tests should be documented in the project diary or inspection report.

Computerized scales shall be equipped with a digital readout and computer capable of producing weigh tickets and daily haul summaries.

Computerized weigh systems are required when the estimated quantity of any pay item is more than 2,000 tons. Loader bucket scales may be used to weigh material with estimated quantities in excess of 2,000 tons, but cannot be used when the estimated quantity is over 10,000 tons. The only exception is loader bucket scales may be used for chip seals, slurry seals or micro surfacing projects regardless of quantity. When the estimated quantity of any pay item is less than 2,000 tons a non-computerized weigh system can be used.

Weigh tickets should include the following information.

- a. Ticket Number
- b. NDDOT Project number or NDDOT PCN
- c. Delivery Date
- d. Contractor and Subcontractor if applicable
- e. Time of Weighing
- f. Identification number of hauling vehicle
- g. Material type identified by pay item name
- h. Unit of Measure
- i. Weight delivered
 1. Net weight for batch, hopper, and loader bucket scales.
 2. Gross Weight, tare weight and net weight for platform scales
- j. Scale person signature for had produced weigh tickets.

The ticket may also include spread information and the running total of the material. Two copies of the tickets will be made. The contractor keeps the original copy.

The duplicate copy of each ticket is given to the truck driver and collected by the inspector on the roadway. This ensures that the loads weighed are being used on the project. As the tickets are collected on the roadway, the inspector will initial each one and keep the tickets separated in groups by use such as mainline, shoulders, approaches, etc. The inspector also writes the location of each different placement area on each group of tickets. Sometimes, only a partial load will be used on the project and the rest of the load will be considered waste. The inspector will write the tons actually used on the ticket and initial it. At the end of the day, the inspector records the following information:

1. Beginning and ending ticket numbers
2. Locations material was placed and the total tons for each area
3. Any missing ticket numbers
4. Any partial or whole loads not used and considered waste

The inspection report and the tickets are used when checking the daily haul summary.

The requirement that an inspector personally receive all load tickets at the time of Delivery may be relaxed only in cases of very small quantities or intermittent deliveries. Under conditions where the project engineer or inspector can visually determine the approximate quantity delivered.

Truck Platform Scale Use

Each truck to be weighed shall be tared daily. Use the previous day's tare weight until a new tare weight for that day is determined. No truck may be used for hauling material paid for on a weight basis until tared.

Contractor Produced Daily Haul Summaries

Computerized weighing systems not only weigh the load and produce a weigh ticket but are also capable of producing a daily haul summary. The contractor produced daily haul summary must include the following information:

1. NDDOT Project number and NDDOT PCN if used on the weigh tickets.
2. Delivery date
3. Contractor and Subcontractor if applicable
4. Pit location and Owner
5. Haul vehicle number
6. Each load's net weight (mass) and ticket number, with justification for out of sequence numbers
7. Material type identified by pay item name
8. Total tons of material delivered to the project
9. Tons of material voided for the day
10. Pay tons for the day's production
11. A signed statement from the contractor attesting to the accuracy and completeness of the facts represented. A signed statement from a subcontractor or supplier attesting to the accuracy and completeness of the facts represented is required if they operate the scales. The following language shall be included: I certify the Daily Haul Summary is true, accurate and complete.
12. Blank for the Engineer's or his designate signature. The following language shall be included: I certify the Daily Haul Summary has been reviewed, corrected as necessary, and approved.
13. Place for remarks.

Check the tickets turned in by the inspector against the contractor produced haul summary. The beginning and ending ticket numbers should correspond with the tickets turned in by the inspector as should the total tons hauled. The total and running total on the contractor's haul summary may be adjusted for voided tickets or partial loads used.

If any corrections to the haul summary are necessary, inform the contractor and have them re-submit a corrected haul summary.

After the contractor's haul summary is verified, the individual who has verified the contractor's haul summary shall sign the haul summary to approve it.

Once approved, the contractor produced haul summary will become the source document for payment. The weigh tickets should be kept with the project records and submitted with final records. After final payment has been made, weigh tickets may be discarded. Copies of the contractor daily haul summaries must be retained and filed.

Non-computer generated daily haul summaries. The weight tickets will be the source document for payment and must be kept with the final records.

Enter the total quantity from the contractors daily haul summary into CARS using a pay quantity report.

1. Make sure the Project and Subproject are correct
2. Click on the Pay Quantity link.
3. The Pay Quantity Selection page is displayed. Click on the Add link by the type of material that was hauled.
4. The Pay Quantity Maintenance page is displayed
5. Enter the date. Pick Contractor's Haul Summary from the source document drop down box. Fill in any remarks. For example, list the number and reason any tickets are void.
6. Enter quantities and their locations in the text boxes. Additional quantity and location text boxes can be added by clicking on the Add Quantity Row button.
7. When all the information has been entered for the contractor generated haul sheet, click on the Save button. If you have more haul summaries to enter, click on the Save and Add New button and a new Pay Quantity Maintenance page will be displayed.

A pay item report can be made for the contractor generated haul sheet especially if several haul sheets are being summarized but it is not necessary. The contractor generated haul sheet will be considered the source document. Copies of the contractor generated haul sheets must be retained and filed.

A copy of any CARS generated haul sheet should be given to the contractor. A copy may also be given to the subcontractor if applicable and one is requested. A copy of the CARS generated haul sheet may also be made and filed in the Haul Sheet file but is not required as the report can be accessed and viewed at any time after it has been saved. Haul sheets should be separated by type of material and filed with the most current haul sheet on top. Additional copies of a CARS generated haul sheet can be made at any time by:

1. Click on the Haul Sheet link in the Report column of the Main Menu. The Daily Report for Haul Sheets page is displayed.
2. If the project displayed in the Project ID is not the correct one, pick a different project from the Project Search Criteria by using the Assigned Project drop down box, typing the project number in the Project ID text box or typing the project control number in the PCN text box and clicking on the Search button.
3. When the project displayed in the Project ID is correct, all the haul sheet data available will be listed by subproject and then by type of material. Click on the date link by the haul sheet report to print.
4. The report will be generated and then printed.

Load Counted Material (Volume Measurement)

Volume measurement is used to determine pay quantities because of the type of material or because only a small quantity is being used. Volume measurements are typically used for items such as foundation fill, riprap and water. Volume measurement can be calculated by load counts or by in-place measurement.

Measured In Place

After the material is placed, measure the length, width and depth of the placement area. Take several depth measurements throughout the area to establish an average depth of the material. Calculate the cubic yards.

Load Counts

Determine which trucks the contractor will use to haul the material. Measure width, length and depth of the truck box and compute the cubic yards. The volume used for each truck's load should be agreed to by the contractor and should not exceed the legal load limits for the hauling unit. Record the truck number and the calculations in the inspector's diary, a load count field book or on a pay item report. This information is necessary to check the quantities when the project is finished.

Record the number of loads each truck hauls and places on the project. Calculate the quantity by multiplying the number of loads by the cubic yard measurement for each truck. These load counts can be kept in a field book or be recorded directly on a pay item report. The contractor must sign the field book or pay quantity report for each day's load counts.

Water quantities are also determined by load counts but instead of cubic yards, water quantities are paid for by "M" gallons. Water hauling units are required to haul loads within their legal load limits so determine the legal load for each water hauling unit before it is used. Payment for individual water loads should never exceed the legal load limits or the tank capacity of the water truck.

To determine the "M" gallons measurement for a water truck, it should be weighed empty (tare weight) and with a full load of water (gross weight). Determine the net weight of the water truck by subtracting the tare weight from the gross weight. Divide the net weight of the water truck in pounds by 8.33 lbs./gal and then divide that number by 1,000 to establish the "M" gallons. Check the licensed legal load for the water truck. Divide the gross vehicle weight by 8.33 lbs/gal and then by 1,000 to determine the licensed legal load in "M" gallons. If the "M" gallons calculated from the net weight is less than the "M" gallons calculated from the GVW of the water truck, use that amount for the load count. The "M" gallons calculated from the GVW will be used if the calculations from the net weight exceed the legal load limit. Spot check the loaded water truck to ensure compliance with legal load limits.

Again, record the number of loads each water truck hauls and places on the project. Calculate the quantity by multiplying the number of loads by the "M" gallon amount for each truck. Keep the load counts in a field book or record them on a pay item report. The contractor must sign the field book or pay item report for each day's load counts.

If a field book is used to document the load counts, note this when entering these types of pay items into CARS.

STOCKPILES AND INVOICED ITEMS

Section 109.06 of the Standard Specifications allows the DOT to make payment for material produced or purchased specifically for a project when requested by the contractor. Payment is based on a receipted invoice, letter or statement furnished by the contractor that lists a breakdown of the material cost. Freight charges may also be included in the payment for stored material. An example of the contractor's breakdown of material costs is included at the end of this section.

Stockpiled or invoiced items must meet specifications for the type of material. The material must be stored on the project site or in an area approved by the project engineer. Payment will not be made for quantities greater than plan quantity. Payment must also not exceed the contract unit price for the item of work that will include the stockpiled or invoiced materials. As these materials are used in the item of work, they will be automatically subtracted from the previously made stockpile or invoiced materials payments.

Payment for stockpiled commercially produced aggregate purchased by the contractor will be based on a receipted invoice for the aggregate material. The invoice must state that the material has been paid for and must be signed or initialed by the supplier. Payment for aggregate produced by the contractor or an approved subcontractor will be based on a signed statement from the contractor with the following information:

1. Project number
2. Type of material
3. Quantity of material stockpiled
4. Location of the stockpile
5. An itemized breakdown of the contractor's production costs for the material

The statement must be filed in the project file. The aggregate must be stockpiled within the vicinity of the project in the state of North Dakota to qualify for payment. Aggregate stockpiled at a commercial source will not be eligible for payment.

Payment for material other than aggregate that is purchase by the contractor from a manufacturer or supplier will be made based on a receipted invoice only. The invoice must state that the material has been paid for and will be signed or initialed by the manufacturer or supplier. The invoice must be filed in the project file.

Payment for material other than aggregate that is manufactured or produced by the contractor can be made after the contractor has submitted a fully documented statement of production costs to the project engineer. The statement must show a breakdown of all labor, equipment and material cost incurred by the contractor in the manufacture or production of the material to be included in a contract bid item. The statement of production costs must be signed by the contractor and must be filed in the project file.

Stockpile or invoiced materials other than aggregate must also be stored on or near the project site and within the boundaries of the state of North Dakota to be considered eligible for payment with the following exceptions:

1. Materials that have been specially manufactured for a specific project and are not suitable for general use in other work can be paid for if stored in the state of North Dakota without being stored near the project. Example of specially manufactured items are:
 - a. Bridge beams
 - b. Prefabricated retrofit box beam guardrail
 - c. Structural steel
2. Material not stored near the project must be tagged or marked with the words 'Property of North Dakota Department of Transportation' or 'Property of NDDOT' to be eligible for payment. This material will also be stored in a manner that it is easily identified from other inventories in the storage area.

Enter Stockpile/Invoiced Items in CARS

To enter stockpile or invoiced items into CARS:

1. Click on the Stockpiles link on the main menu. The Stockpile spec and code Selection page is displayed.
2. Click on the Add link for the material or items to be stockpiled. The Stockpile/Invoiced Item Maintenance page is displayed.
 - a. Enter the date
 - b. Click in the radio button to choose between stockpile or invoiced.
 - c. If the item to be stockpiled is material added by change order, be sure the change order material is chosen in the Change Order drop down box.
 - d. Enter the quantity and price.
 - e. Remarks can be entered in the text box provided. These will be displayed in the quantity book.
3. Click on Save.

Deplete Stockpile/Invoiced Items in CARS

Stockpile or Invoiced items will be automatically depleted as the material is entered in the various reports such as haul sheets or in the pay quantity option.

If there is any stockpile quantity remaining when the work for the contract item is completed, it can be deleted by:

1. From the Main Menu, click on the Stockpiles link. The Stockpiles page is displayed.
2. Find the spec and code for the item to delete and click on the Maint link. The Stockpile/Invoiced Item Selection page is displayed.
3. Click on the date link for the stockpile/invoiced item. The Stockpile/Invoiced Item Maintenance page is displayed.
4. Click in the check box by Deplete Quantity.
5. Click on Save. This will deplete any remaining stockpile or invoiced quantity.

STATEMENT OF PRODUCTION COSTS

TO: North Dakota Department of Transportation
District Office
Grand Forks, ND

This is to certify that we have crushed and stockpiled, at the pit site located in the following location

NE 2 5-158-35

3,000 tons of Class 4 for use on Project No. F-6-111((801)182 in Walsh County.

The following are our costs for producing this material:

Moving to Job Site	\$.22
Stripping25
Crushing	1.00
Stockpiling30
Supervision	<u>.13</u>
Total per Ton	\$1.90

Signed by

Title Estimator

**SECTION 5
CONTRACT CHANGES/PROGRESSIVE ESTIMATES**

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Change Orders

It is the contractor's responsibility to construct the project according to the requirements of the plans, special provisions and specifications as originally drawn and written unless the project is revised by approved written change orders.

Section 104 of the Standard Specifications allows the DOT to modify the plans and terms of the contract by changes, additions or deletions to properly complete the work planned under the contract.

Contract changes are alterations or revisions of the plans and quantities of work, deletion of work items found unnecessary during construction or extra work required to properly complete the project.

Alterations

Alterations on the contract include changes made in the plans or plan quantities, revision of the method of measurement for pay quantities, deletion of items of work or extra work determined necessary during construction due to unforeseen circumstances or to make a beneficial improvement to the project. These alterations will require a written change order.

Contract Change Orders

A contract change order is a written supplemental agreement executed between the contractor and the DOT which provides for the performance of modifications to the contract such as changes in plans, specifications, special provisions or plan quantities. A contract change order would also be created for changes in the construction of the project necessary to satisfactorily complete the work.

The effect of the change order on contract time will be addressed on all change orders whether an adjustment to time is made or not. Section 108.04 of the Standard Specifications provides guidelines when determining a time adjustment on the change order. Justifiable increases or decreases in contract time should be included in the change order whenever the number of days can be determined with reasonable certainty. When the amount of contract time cannot be determined at the time the change order is created, the option stating that the contract time 'may be revised if the work affects/affected the controlling operation' should be used.

When preparing a change order, you will be required to include a detailed explanation of the change to the contract including quantities affected, items added and the reasons for the change to the project.

Justification for unit prices on the change order must be adequately explained and documented. Change orders should be prepared under the presumption that the approval authorities may not be as familiar with the details of the work as the engineer.

A change order must be self-explanatory and must incorporate sufficient detail to assist the approval authority in evaluation of the change order. Justification for unit prices on change orders needs to receive special emphasis by the project engineer and the district. Change orders must provide adequate documentation to establish a basis for unit costs before the appropriate authority approves the change order.

The list of Annual Average Bid Prices can be used to compare against unit prices submitted by the contractor. You may also require the contractor to submit a breakdown of costs as justification for the unit price submitted.

Increased or Decreased Quantities

The quantities of any item of work on a project may vary from the original plan estimate. The specifications provide protection for both the owner and the contractor by allowing an adjustment of the contract unit price when the quantity of a major work item is increased or decreased by more than 25 percent from the original contract quantity. Any adjustments of the contract unit price will be made by change order. These adjustments are governed by Section 104 of the Standard Specifications. A change order is not required for normal increases or decreases in contract item quantities that occur in the completion of the project or to delete minor bid items that were not required on the project. A change order is also not required for those items adjusted by provisions in the specifications such as deducts for failing materials.

Force Accounts

A force account is a method to document extra work where the final payment is based on actual costs plus approved additives. The requirements for force accounts are found in Section 109 of the Standard Specifications. The completed force account would be added to the contract on a change order. This process is more completely explained in the section on Force Accounts.

Change Order Approval Procedures

Work added to the project by change order should not be started by the contractor until the change order has been created and has been signed by the contractor, the project engineer and all other required approval authorities.

When conditions dictate that the extra work begin without delay and the work is estimated to be beyond the project engineer's approval authority, verbal approval for the change order may be obtained so the work can progress. The change order document should be created and signatures obtained as soon as possible. Work on a change order item can be started before a change order has been created if:

1. A delay in starting the work would jeopardize life, property or result in environmental damage
2. A delay in starting the work would result in delay damages to the contractor or the DOT

3. A fully executed change order will be processed for approval as soon as possible.

If higher approval authorities disagree with the project engineer's decision and direct the work to stop, all work performed to that point will be paid for under the terms of Section 109.04 Force Account. The project records of the contractor's labor, equipment and materials used to perform the work must be kept with enough detail to allow accurate payment.

On change orders with non-participating items added, signatures will also be obtained from the owner responsible for the costs i.e., city, county, park district, etc.

Projects with full FHWA involvement will require prior FHWA approval for non-participating change orders for proposed changes and extra work greater than \$100,000 that may affect the design or participating construction items on the project.

Change Order Approval

Change order approval authority is determined by the monetary amount of the change order, and/or the reason for the change order. The [Change Order Approval Process](#) chart shows the required approval authority for various types of change orders and monetary amounts. Parts A through E are described as follows:

Part A

The **project engineer** has final change order approval authority for the change orders listed in Part A-1 if the following conditions are not exceeded:

1. Net change order increase or decrease up to \$10,000
2. Any single contract pay item with an increase or decrease up to \$10,000
3. Force Account up to \$10,000
4. A time extension up to five working days

The **District Engineer** has final change order approval authority for the change orders listed in Part A-1 if the following conditions are not exceeded:

1. Net change order increase or decrease up to \$50,000
2. Any single contract pay item with an increase or decrease up to \$50,000
3. Force Account up to \$50,000
4. A time extension up to fifteen working days

The **Director of Operations** has final change order approval authority for the change orders listed in Part A-1 if the following conditions are not exceeded.

Net change order increase or decrease up to \$100,000

1. Net change order increase or decrease exceeding \$100,000
2. Any single contract pay item with an increase or decrease up to \$100,000
3. Force Account up to \$100,000
4. A time extension up to thirty working days

The **Director of Operations** or **Deputy Director for Engineering** has final change order approval authority for the change orders listed in Part A-2.

1. Net change order increase or decrease exceeding \$100,000
2. Any single contract pay item with an increase or decrease exceeding \$100,000
3. Force Account exceeding \$100,000
4. A time extension over 30 working days

The **Federal Highway Administration** must also pre-approve the change order if the following apply:

1. Part A-1, Full Involvement, time extension over 15 working days
2. Part A-2, Full Involvement, Costs over \$100,000

3. Part A-2, Full Involvement, time extension over 15 working days
FHWA approval of minor change orders will be accomplished when the final voucher is approved.

When local agency approval is required, the change order must also be signed by a representative of that agency.

Parts B and C

Change orders described in Part B 'Structural design changes' and Part C 'Changes in specifications' require Department approval at the Office of Operations level as shown in the approval chart. Prior FHWA approval of the change order is required if:

1. Part B. Costs over \$100,000 and Full Involvement
2. Part C. Changes affecting major items of work as defined in 104.03B and Full Involvement

FHWA approval of minor change orders will be accomplished when the final voucher is approved.

Part D and E

All change orders described in Part D 'Environmental Commitments' and Part E 'Emergency Relief' of the approval process chart require FHWA approval on all projects despite the highway system or monetary amount of the change order. This also applies to all county and urban projects. Minor changes in project limits are meant to only include necessary practical adjustments within the general vicinity of the current approved project limits.

Change Order Approval Procedures for Non-NDDOT Projects

On Non-NDDOT project without federal aid, the owner's authorized representative such as a city, county, park district, etc. will approve change orders. The DOT does not review these change orders for approval.

On Non-NDDOT project with federal aid, the owner and/or the owner's authorized representative will approve the change order. Change orders that have non-participating items must be approved by the owner responsible for the costs.

The Department will review change orders that exceed any of the following criteria to determine if the costs are eligible for federal aid. These are:

1. Net increase or decrease greater than \$10,000
2. Any single contract pay item with an increase or decrease greater than \$10,000
3. A Force Account greater than \$10,000
4. A time extension greater than five working days

The District Engineer and, if required, the Director of Operations, will review and approve these change orders for federal aid eligibility. The approval authority of the District Engineer and Director of Operations for federal aid eligibility is the same as the authority provided on Department projects and detailed in the Change Order Approval Process chart.

If the federal funds authorized in the cost participation agreement with the local agency are exceeded and no federal funds are available for any change order, the local agency will assume the total cost of the change order.

If the federal aid participation on the project is limited and the limit is reached, the NDDOT will no longer review and approve subsequent change orders for federal aid eligibility. The owner will be responsible for those extra costs.

Changes to emergency relief projects that affect ER participation or eligibility of added work must have prior FHWA concurrence. Normal overruns and underruns plus routine change orders on ER project should be processed according to procedures previously defined.

All original copies of fully executed change orders shall be forwarded to Construction Services for recording, processing and distribution, regardless of the approval level.

CHANGE ORDER APPROVAL PROCESS CHART
North Dakota Department of Transportation (NDDOT)

REASON FOR CHANGE ORDER	CHANGE ORDER PARAMETERS	FINAL APPROVAL AUTHORITY ⁴
<p>A-1. Non-Major Change and Non-Major Extra Work</p> <ul style="list-style-type: none"> • Changes in contract documents. • Extra work within the scope of the contract. • For establishing the basis of payment or time adjustments for work affected by the changes. <p>Does not include the reasons listed below in items B through E. Costs over \$100,000¹ fall under A-2.</p>	Costs up to \$10,000. ¹ Time extensions up to 5 working days. ²	Project Engineer
	Costs over \$10,000 up to \$50,000. ¹ Time extensions over 5 working days up to 15 working days. ²	NDDOT District Engineer
	Costs over \$50,000 up to \$100,000. ¹ Time extensions over 15 working days up to 30 working days. ²	Director of Office of Operations
	Time extensions over 15 working days and Full Involvement. ²	Federal Highway Administration ³
<p>A-2. Major Change and Major Extra Work</p> <p>A major change is a project change that will significantly affect the cost of the project, character, or scope of work.</p>	Costs over \$100,000. ¹ Time extensions over 30 working days. ²	Director of Office of Operations or Deputy Director for Engineering
	Costs over \$100,000 and Full Involvement. ¹ Time extensions over 15 working days and Full Involvement. ²	Federal Highway Administration ³
<p>B. Structural Design Changes.</p>	All	Director of Office of Operations
	Costs over \$100,000 and Full Involvement. ¹	Federal Highway Administration ³
<p>C. Changes in specifications, including materials specifications.</p>	All	Director of Office of Operations
	Changes affecting major items of work as defined in 104.03 B and Full Involvement. ¹	Federal Highway Administration ³
<p>D. Changes that affect the “Environmental Commitments”, alter the project termini, or impact the environment to where the environmental action needs to be reassessed.</p>	All	Federal Highway Administration ³
<p>E. Emergency Relief (ER)-Changes to ER-funded projects that affect ER Participation or eligibility of added work.</p>	All	Federal Highway Administration ³

1. Cost thresholds can be an increase or decrease to the original cost.
2. Calendar to working days conversion: [working days =(calendar days requested)×(working days specified to be charged per week)÷7].
3. Verbal approval is required prior to the start of change order work.
4. If not authorized to sign as final approval authority, need to sign “Approval Recommended” before going to the next authority.

Change Orders in CARS

When entering change order data into CARS, you will be required to choose a change order reason from the drop down list on the Change Order Maintenance page. The choices are as follows:

1. Design changes
2. Structural design changes
3. Changes in specifications
4. Environmental commitments
5. Major changes in project limits
6. Emergency relief

The approval signatures required will be shown on the Change Order Approval page. The approval level is based on the change order reasons, the monetary amounts on the change order and the time extensions approved in the change order.

You will also be required to pick a Category and Sub-Category for the change order items. The sub-categories are different for each category. The categories and sub-categories will be used to track the types and amounts of change orders during the construction season and produce a report. The categories and their sub-categories are listed below.

1. Design Changes
 - a. Plan error/omission
 - b. Work due to unknown condition
 - c. Design change to improve the project/public interest
 - d. Design change to provide equal or greater product for less cost
 - e. Work done to correct error in the field
 - f. Value Engineering Proposal
2. Specification Changes
 - a. Equal or better product for less cost
 - b. Unable to construct/supply what was specified
 - c. Original specifications were not suitable for project
3. Contract Administration Issue
 - a. Price deductions
 - b. Resolution of Notice of Intent or Claim
 - c. Haul Road Related Issues
 - d. Fuel Cost Adjustments
 - e. Partnering
4. Other
 - a. This category is used when the change order item does not fit in any of the other categories. The project engineer will be required to enter a short description for the sub-category.

To create a change order in CARS:

1. From the Main Menu, click on the Change Order link. The Change Order Selection page is displayed. Any change orders created previously will be displayed in descending order and

separated by subproject. The change order number, date created, change order reason and approval status are shown.

2. To create a new change order, click on the Add Change Order link. The Change Order Maintenance page is displayed.
3. A change order number is assigned and the date you are creating the change order is displayed.
4. The Reason drop down box has six general categories which are used along with dollar amounts to determine approval authority. Pick the one that best describes why the change order is being created.
5. Pick one of the choices in the Contract Time Change drop down box. If a change is being made in the contract time, enter the increase or decrease in the Calendar Days text box.
6. A short description of the change order work can be entered in the Remarks text box. The Remarks entered here are used for identification of the change order in the Change Order Summary management report. They are also displayed on the Change Order after the Explanation of Change.
7. Enter a narrative of the change being made in the Explanation of Change text box. Additional details such as price breakdown and correspondence from the contractor may be attached to the hard copy change order.
8. Click on the Save and Continue button. The Change Order Spec/Code List is displayed.
9. Click on the Add Spec Code button. The Change Order Spec/Code Maintenance page is displayed.
10. Enter the Spec and Code for the item being added, if known. The spec and code can also be determined two ways:
 - a. Click on the Annual Average Bid Price Report link. The Bid Opening Reports page from the DOT website will open in a separate window. Go to the drop down box under Annual Average Bid Price and click on the report year. The Annual Average Bid Price list will open and you can browse the list for the item to be added if you are adding an item with a valid spec and code.
 - b. If you know the specification number for the item to be added but are not sure of the code, type the spec number in the text box and click on the Search button. A list of all valid items for that spec number will be opened. Click on the link for the item to be added and the code number will be filled in.
11. Enter the unit price and quantity.
12. Click in one of the radio buttons to mark the item Participating or Non-Participating.
13. In the Category drop down box, pick one of the options. If the item doesn't fall into the design change, specification change or contract administration issue options, choose the Other category and enter a short description in the Other text box.
14. In the Sub-Category drop down box, pick the subcategory that best describes the change order item.
15. If the item added by change order doesn't have a valid spec and code (one not found in the list), you will be required to enter the following information:
 - a. Enter a short description in the Description text box. For example, you are adding a force account on the change order and are using 109/0180 for the spec and code. Enter 'Force Account #1' in the description text box.
 - b. Pick the unit for the item being added.
 - c. If the item being added will be recorded on a mix bitumen report, concrete paving report, test piling/piling report or haul sheet, pick the spec/code group that applies from the drop down list. This allows the change order item to be added as a choice for these reports.

16. Click on the Save and Add New button to enter additional items for the change order. Clicking on the Save button will return you to the Change Order Spec/Code List. From this page, you can click on the Add Spec Code button to enter additional items for the change order.
17. The Change Order report can be printed from several places in the change order screens.
 - a. From the Change Order Selection page, click on the Report link.
 - b. From the Change Order Maintenance page, click on the Save and Run Report button.
 - c. From the Change Order Spec/Code List page, click on the Run Report button.

After all the information has been entered and saved, the change order will be displayed on the Change Order Selection page and it will be shown as 'Not Approved' in the Approval column. A printed report will be used to gather signatures for all required approval levels. When the change order has gone through the approval process and is returned to the project engineer, it will have to be marked Approved before it will be added in the pay quantity list.

Mark the change order approved by:

1. From the Main Menu, click on the Change Order link. The Change Order Selection page is displayed.
2. Click on the Not Approved link for the change order to be approved. The Change Order Approval page is displayed.
3. Click on the Approve Change Order check box.
4. Click on the Save button. You will be returned to the Change Order Selection page.

The change order will now show 'Approved' in the Approval column and the change order items will be added to the Pay Quantity page in spec and code order with the original contract items.

The information entered for the change order can be edited or deleted as long as it has not been marked approved. Once the change order is marked approved, the information can only be viewed.

All change orders regardless of amounts are subject to review at any time for proper expenditure of Federal funds. Sometimes a change order is processed and approved and it is determined later by the FHWA or the NDDOT that all or part of the change order is non-participating. The project engineer will be informed about the funding change. A change order will be created deleting the participating item or items and adding them back to the project as non-participating items.

Contract Adjustments

Contract adjustments are used to add bid items to the project when the unit price is established in the contract documents such as the Standard Specifications or the bidder's proposal for the project. Some examples of items commonly added to the project using the contract adjustment are deducts for failing materials, piling adjustments and bonus or deducts for contract items. Adding items using the contract adjustment is similar to adding items by change order but does not require approval signatures.

Some contract adjustments do not have a fixed unit price but are computed by using a formula set in the contract documents. Unit price adjustment computations must be included in the project records. These computations can be documented on the pay quantity report made out for the contract adjustment.

Create Contract Adjustments in CARS

To create a contract adjustment in CARS:

1. From the Main Menu, click on the Contract Adjustment link. The Contract Adjustment Selection page is displayed.
2. Click on the Add button to enter a new contract adjustment. The Contract Adjustment Maintenance page is displayed. Enter the following information:
 - a. Date
 - b. Enter the spec and code from the Spec & Code List at the bottom of this section. They are also included in the Spec & Code list on the NDDOT website. If no Spec & Code number for the Contract Adjustment exists call the Construction Services Division. A Spec & Code number will be assigned or instructions will be given to process adjustments that will not be added to the list.
 - c. Enter the unit price and quantity for the adjustment.
 - d. Determine if the contract adjustment is participating or non-participating and click the appropriate radio button.
 - e. The Adjustment Description text box can be used to enter a short explanation of the contract adjustment. This will be displayed under the item name of the Contract Adjustment Selection page.
 - f. The Remarks text box is used to enter more information about the contract adjustment. For example, if a deduct for failing aggregate samples is being added to the project by contract adjustment, the remarks text box could be used to document which samples failed.
3. After all the information has been entered, click on the Save button. If you have entered a spec and code that is not valid (one that is not in the list of spec and code numbers), two error messages will display at the top of the Contract Adjustment Maintenance screen. This requires entry of a short description of the contract adjustment in the Item Description text box. You will also be required to pick a unit designation from the Unit drop down box.
4. After all the required information has been entered and successfully saved, you will be returned to the Contract Adjustment Selection screen. The item added will be listed and a Generate Pay Quantity will be displayed. Clicking on this link produces a pop up box that asks if you want to pay the entire quantity. If so, click OK. If you want to pay for a partial amount or pay for the quantity at a later time, the contract adjustments are listed separately at the end of the pay quantity spec and code selection page.

Spec & Code List

<u>Spec</u>	<u>Code</u>	<u>Unit</u>	<u>Bid Item</u>
100	9950	MHR	PS-1: Flagging
100	9951	MGAL	PS-1: Water
100	9952	TON	PS-1: Bituminous Mix
100	9953	LSUM	PS-1: Bitumen for Mix
100	9954	TON	PS-1: Aggregate Base
100	9955	CY	PS-1: Rock Excavation
100	9956	CY	PS-1: Shale Excavation
100	9957	CY	PS-1: Muck Excavation

100	9958	CY/Mile	PS-1: Overhaul
100	9959	TON	PS-1: Bituminous Mixture
100	9960	TON	PS-1: Blotter Sand
100	9961	CY	PS-1: Low Slump Concrete
100	9962	LF	PS-1: Mucking Silt Fence
100	9963	LF	PS-1: Mucking of Fiber Rolls
100	9964	LF	PS-1: Removal of Silt Fence
100	9965	LF	PS-1: Removal of Fiber Rolls
105	9950	LSUM	Construction Staking Replacement
105	9955	LSUM	Work Site Maintenance
106	9950	LSUM	Department Furnished Material Damage Deducti
106	9955	LSUM	Demurrage Charges
107	9950	LSUM	Maintenance of Traffic During Suspension Cha
108	9950	DAY	Liquidated Damages
108	9955	DAY	Early Completion Incentive
108	9956	DAY	Late Completion Disincentive
108	9960	LSUM	CPM Schedule Deduction
108	9965	LSUM	Costs and Damages for Dflt and Termination of Co
109	100	LSUM	Diesel Fuel Cost Adjustment
109	200	LSUM	Unleaded Fuel Cost Adjustment
109	300	LSUM	Burner Fuel Adjustment
109	410	LSUM	HBP Ride Adjustment
109	550	LSUM	PCC Ride Adjustment
109	9950	LSUM	Force Account
109	9955	LSUM	Bitumen Penetration Test Failure Deduction
109	9956	LSUM	Bitumen Demulsibility Test Failure Deduction
110	9950	LSUM	Erosion, Pollution and Sediment Control Cost De
302	9950	LSUM	Gradation Deduction for Aggregate Base
302	9960	LSUM	Bitumen Content Deduction for Salvaged Base
302	9956	LSUM	Shale Content Deduction for Salvaged Base
304	9950	LSUM	Gradation Deduction for Permeable Stabilized
304	9955	LSUM	Thickness Deduction for Permeable Stabilized
306	9950	LSUM	Gradation Deduction for Blended Base Course
400	9950	LSUM	Gradation Deduction for Bituminous Pavement
400	9951	LSUM	Bitumen Content Deduction for Bituminous Pav
400	9952	LSUM	Compaction Deduction for Bituminous Pavement
400	9953	LSUM	Shale Content Deduction for Bitumious Pavem
400	9954	LSUM	Fractured Faces Deduction for Bituminous Pav
400	9955	LSUM	L.A. Abrasion Deduction for Bituminous Pavem
420	9950	LSUM	Gradation Deduction for Bituminous Seal Coat
550	9950	LSUM	Reinforcing Steel Deduction
550	9951	LSUM	Concrete Pavement Thickness Deduction
622	9050	LF	Pile Cutoff

622	9951	EACH	Pile Splice
704	9950	LSUM	Attenuation Device Replacement
704	9951	DAY	Traffic Control Deficiency Deduction
709	9950	LSUM	Failing Geotextile Fabric Deduction
762	9950	LSUM	Short Term Pavement Marking Adjustment
762	9955	LSUM	Epoxy Pvmt Marking Material Deficiency Deduc
762	9956	LSUM	Epoxy Pvmt Mk Material Retroreflectivity Deduc
826	9950	LSUM	Joint Sealant Material Deduction

Progressive Estimates

The quantities listed in the plans and proposals are estimated quantities of work to be completed by the contractor. The breakdown of quantities and the different funding sources are listed in the detail sheets. Payment to the contractor is made for the actual quantities incorporated in the project work. Accurate documentation of all pay quantities is kept by using inspection reports, field books and various reports such as those used for concrete paving, mix bitumen, haul sheets, etc. The pay quantities are recorded in the quantity book on a regular basis and are used to make regular payments to the contractor. These payments are made on the progressive estimate. If a contract has multiple tied projects, a separate estimate is used for each project even though there is only one contract.

A minimum of one progressive estimate a month will be made as the project work proceeds. Progressive estimates may be created as often as the amount of work completed is sufficient to warrant making a payment to the contractor. Keep in mind that a subcontractor's work is sometimes performed near the end of a project. This may include items such as seeding, sod, striping, signing, lighting, signals, etc. Unless special circumstances exist that demand withholding payment, intermediate estimates should be prepared to pay for subcontract work items in order for the subcontractors to receive timely payments. DO NOT wait until the final estimate to pay for the subcontract work items completed.

Most estimate quantities are based on actual field measured quantities. Some items such as common excavation may be paid as an estimated quantity until all final measurements can be made and calculated. Estimates also include payments for stockpiled or invoiced materials, contract adjustments and change order items.

The progressive estimate consists of detail sheets listing all original pay items along with any items added by change order in order by specification and code number. The detail sheets also include those items added by contract adjustment and stockpile/invoiced items. Detail sheets will also be divided by subprojects. The progressive estimate has a cover sheet that shows the estimate number, the dates covered by the estimate and a breakdown by funding sources of the total monetary amount for the estimate.

Estimates are generated by the project engineer. When the estimate is generated, the project engineer can review the quantities and make any changes if required. The estimate must be re-generated if any changes are made.

Liquidated Damages

Liquidated damages are assessed when the project work has not been completed within the time allowed in the contract documents or approved time extensions.

Liquidated damages are charged on the total contract amount. On contracts with tied projects, liquidated damages will be prorated per project. For example, projects A, B, and C are let as one contract totaling \$1,000,000. The total bid amounts for the projects are as follows:

Project A - \$500,000
Project B - \$375,000
Project C - \$125,000

If 8 days @ \$400.00/day are charged against the contract, the days for each project would be as follows:

Project A - 4 days

Project B - 3 days

Project C - 1 day

Create Progressive Estimate in CARS

To make a progressive estimate in CARS:

1. From the Main Menu, click on Create Progressive Estimate. The Create Progressive Estimate page is displayed.
2. On the Create Progressive Estimate page, the following items are shown:
 - a. A message will display if the previous estimate has been paid or if a progressive estimate has been generated but not paid and additional pay items have been added since it was generated.
 - b. The construction start date or the previous estimate date.
 - c. The date the estimate is being created.
 - d. The division of the DOT responsible for approval of the estimate before it is sent to Finance. Most projects will be approved by the Construction Services Division but some will be approved by the District or by the Maintenance Division.
 - e. A drop down box for the estimate type – intermediate, semi-final and final.
 - f. Text boxes are provided for the retainage percent or a retainage amount. These will only be filled in for semi-final estimates where you have approval from Construction Services to reduce the retainage to less than one percent or to a specific dollar amount.
 - g. Text boxes to enter liquidated damage amounts and days to the estimate.
3. To create the progressive estimate, click on the Generate button. The Progressive Estimate page is displayed.
4. The Progressive Estimate page displays the following information about the estimate:
 - a. The status of the estimate. Until the estimate is approved by the project engineer, the status is shown as preliminary. The status will change as the estimate goes through the approval process.
 - b. An estimate number will be assigned after the project engineer has approved the estimate.
 - c. The division, type of estimate and estimate dates are shown.
 - d. The payment this estimate and total amount to date are shown. All subprojects and the total amount for each subproject are listed.
 - e. Detail sheets may be viewed and printed separately by clicking on the Details link after the total amount for each subproject. All the subprojects can be viewed and printed at once by clicking on the All Details button.
 - f. The cover sheet can be viewed and printed by clicking on the Cover Sheet button.
5. If all the detail sheets and cover sheet are acceptable, click on the Approved button. A dialog box asking if the estimate should be approved will be displayed. Click OK and the estimate will electronically transfer to the next approval authority.

If the estimate should not have been approved, it can still be rejected at the District or Construction Engineer level. If the estimate is rejected by the District or Construction Engineer, it goes back to the Project Engineer level to be edited and re-generated. When the estimate has been through all the

approvals, the message on the Create Progressive Estimate page will show that the last estimate number has been paid. No new estimates can be created until the previous estimate has been through the entire approval process and has been sent for payment.

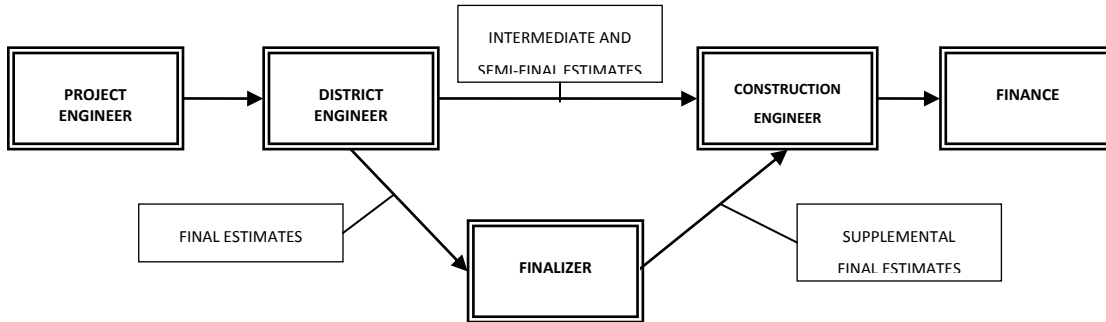
Not all estimates will be approved by the Construction Engineer. Projects that are paid with Maintenance funds will be approved by the Maintenance Engineer. District funded projects will be approved by the District Engineer. The Claim for Payment will be signed by the individual having approval authority for the estimate.

The diagrams on the following page show the electronic flow for intermediate, semi-final and final estimates approved by the Construction Engineer, the Maintenance Engineer and the District Engineer.

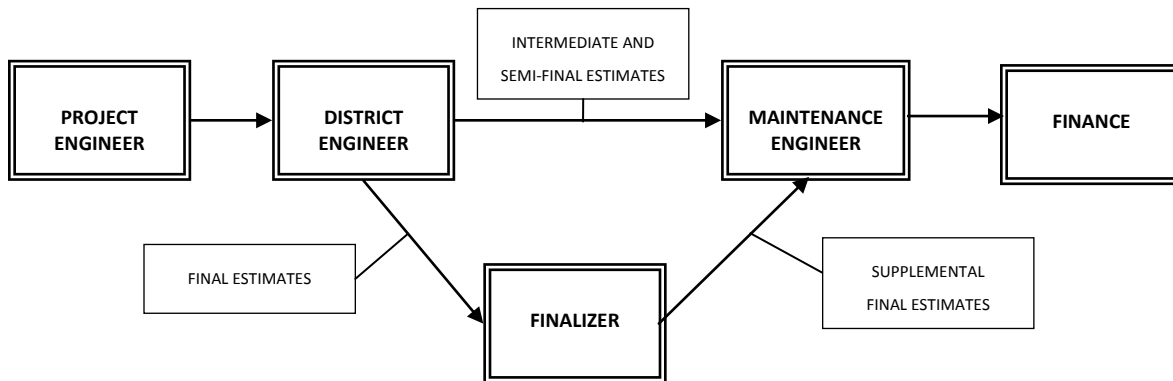
It is no longer necessary to generate estimates at the end of the fiscal year or those with a June 30th cut off date on projects that have used CARS to generate pay estimates. CARS will automatically sort the pay items by date and the amounts for each fiscal year will be indicated in the information forwarded to Finance.

Estimated Approval Flow Charts

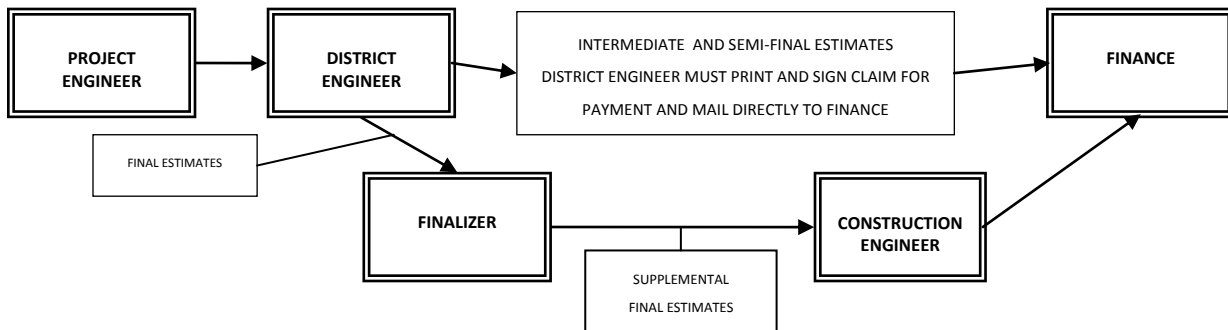
CONSTRUCTION PROGRESSIVE ESTIMATE FLOW



MAINTENANCE PROGRESSIVE ESTIMATE FLOW



DISTRICT PROGRESSIVE ESTIMATE FLOW



Fuel Cost Adjustment

All contracts contain the special provision 'Fuel Cost Adjustment Clause'. The project engineer must check the Fuel Cost Adjustment Affidavit (SFN 58393) found in the project proposal to see if the contractor is participating in the fuel cost adjustment program.

If the contractor elects to participate, the project engineer will calculate the adjustments monthly using the Fuel Cost Adjustment Worksheet (SFN 58543). The worksheet and guidance for calculating the adjustments can be found on the NDDOT website at the following address:

http://www.dot.nd.gov/fuelcost_adjustment.html

Extension Projects

Small scale projects are sometimes added to an existing project by creating an extension project. Because of the proximity of the small project to the contractor's work and plant operations, it is more economically feasible to add the work in this manner. Extension projects are generally district funded non-participating projects or emergency relief projects that may be eligible for federal funds. The District and the contractor negotiate the unit prices and time allowed to accomplish the work.

To add an extension project, the District notifies Construction Services that the work will be added along with the project numbers to be used for the extension project and the parent project. Construction Services will set up the project information and a project engineer will be assigned to the extension project. After that, the extension project will be in the assigned project drop down list for the engineer.

The project engineer will create a change order for the extension project adding all work items required. The change order is signed by the contractor, the project engineer and the District and is then forwarded to Construction Services.

After reviewing the change order, the financial information required will be added that allows estimates to be generated for the extension project.

All project records and documents for the extension project will be included in the final for the parent project.

Force Account

Extra work can be performed on a project due to unforeseen circumstances or to make a beneficial improvement to the project. Payment for extra work can be made at an agreed unit price or lump sum. A change order signed by the contractor, project engineer and all other approval authorities directs and pays for the extra work. When an agreement cannot be reached as to method of payment, the project engineer can direct the contractor to complete the work on a force account basis. Standard Specifications 104.03.D and 109.04 contain further information about extra work and force account

The project inspector must keep accurate, detailed records of all labor hours, equipment hours and materials used for the force account whenever the contractor is working on the extra work item. Preliminary field documentation of employee names, employee hours, equipment used, equipment hours and any material incorporated in the work are kept on SFN 14462 Statement of Daily Force Account Work. The project number, date, type of extra work, the contractor and subcontractor if

applicable, are entered on the top portion of the statement. At the end of each day, the contractor and the inspector will review the force account records and each will sign the daily statement. The inspector retains the white copy and the contractor is given the yellow carbon copy. The remaining information for the Statement of Daily Force Account Work will be collected and filled in at the field office.

Force Account Maintenance

Before entering any of the labor, equipment or materials information into CARS, the force account must be added. The Force Account Maintenance page is for entry of the date, a short description of the extra work item, a subcontractor, if applicable, and mark-up percentages. After this information is entered and saved, a number will be assigned to the force account work.

Labor

The classification and wage rates for employees that worked on the force account item are filled out using the contractor's payrolls. The wage rates shown on the contractor's payrolls should agree with those rates set in the project proposal for the classification shown. Some classifications are also compensated for pension/health & welfare. These amounts are also included in the force account. The pension/health & welfare amounts are paid on a straight time basis only. For example, an employee on the force account works eight hours of straight time and two hours of overtime. The total for pension/health & welfare would be computed at ten hours multiplied by the rate. The employee may have more hours worked on the payroll than documented on the force account statement but should not have fewer hours. Hours worked on the force account should not exceed hours shown on the payrolls. Mechanic hours are not included in the force account labor as their functions are included in the rental rates for equipment.

A contractor's foreman sometimes works on force account items. If the foreman is paid hourly, compensation will be the hourly rate shown on the contractor's payroll. When a foreman is a salaried employee, an hourly rate will be determined by dividing the rate of pay by the number of hours the foreman is expected to work. For example, the foreman is paid \$700 for a 50 hour work week. In this case, the foreman's hourly rate would be \$14.00/hr. You will also have to know if the foreman is compensated with overtime pay for any hours worked in excess of the 50 hour work week. The contractor must submit this information in writing. The foreman's hourly rate is then put on SFN 13890 Equipment Rental and Wage Rates Agreement. If the foreman has more hours worked per day than shown in the foreman's salary determination and is not compensated for the increased hours, the extra hours will not be paid for on the force account. On force account work, the contractor is only reimbursed for actual costs.

When all the required labor information has been received, it can be entered in the personnel details portion for force accounts in CARS.

Equipment

Along with the type of equipment and number of equipment hours worked, it is useful to collect as much other information about the equipment as possible. This information is recorded on SFN 13891 Request for Equipment Rental Rate Determination. Fill out as much information on each piece of equipment including the contractor's equipment number, the brand & type of equipment, the model number, the model year, and the equipment capacity. It is acceptable to fill out the preliminary

information and have the contractor complete the remaining information on the request. After you have gathered as much information on a piece of equipment as possible, submit the request to Construction Services.

When the rental rate determinations have been completed, all rental rates for equipment and any wage rates, such as the foreman's rate discussed previously, are added to SFN 13890 Agreement for Wage and Equipment Rental Rates. This agreement is signed by the contractor and the project engineer and indicates the contractor's acceptance of the rental and wage rates shown.

Equipment rates and hours are entered in the equipment details portion of force account in CARS.

Material

The contractor is also compensated for any material incorporated into the force account work. Any items used in the force account work that are part of the original bid items will be paid at contract unit prices on the progressive estimate not on the force account. All other material used on a force account will be paid at prices shown on invoices furnished by the contractor. The contractor will also be compensated for any state and local taxes paid on the material and any shipping costs shown on the invoice.

If material is used to construct the force account but is not incorporated as a permanent part of the extra work item, a reasonable depreciation for the material plus transportation costs will be allowed. An example would be concrete forms or form material.

When all the necessary documentation for materials has been received, it can be entered in the materials detail section of CARS.

Summary of Force Account

When all the information for labor, equipment and material has been collected and entered in the details sections, a summary will be generated. This computes the totals with all markups for the force account. The summary will be signed by the project engineer and the contractor. The force account work will be added to the project with a change order. After the change order has been signed by the contractor and the project engineer, it is submitted to Construction Services.

The following supporting documents will be submitted with the change order:

1. All Statements of Daily Force Account Work
2. The Force Account Equipment, Materials and Personnel detail reports from CARS
3. The Force Account Summary report from CARS
4. Copies of the contractor's payrolls supporting the personnel entries
5. The Agreement for Wage and Equipment Rental Rates
6. Any invoices supporting materials entries

Do not approve the change order in CARS until the change order and force account documents have been checked and returned to you by Construction Services. If any errors are found in the force account, the final amount on the change order can be edited before it is added to the CARS pay items.

If the force account becomes large or covers a long time period, you may want to create a change order for an estimated force account item. This can be done in order to make payment to the contractor until all the required documentation is gathered and the force account total calculated. Remember to subtract the estimated force account payment from the pay quantities when you pay for the final amount of the completed force account. For a large force account, you may also submit the completed force account documentation to Construction Services to be checked before creating the change order.

Enter Force Account Information in CARS

To enter force account information into CARS:

1. From the Main Menu, click on the Force Account link. The Force Account Selection page is displayed.
2. Click on the Add button. The Force Account Maintenance page is displayed.
3. On the Force Account Maintenance page, enter the following information:
 - a. A short description of the type of work
 - b. Enter the date. This date will be displayed when printing the Summary of Force Account report.
 - c. If the force account work was performed by a subcontractor, pick the subcontractor from the list in the drop down box.
 - d. Default values for percent of labor, percent of materials and the prime contractor's percentage automatically fill the text boxes. These percentages can be edited if required. For example, if the force account is for work on a structure the labor percentage should be changed to 75.0 or if the force account was done by the prime contractor, the prime contractor's percentage would be changed to 0.0.
4. After all the information is entered on the Force Account Maintenance page, click on the Save button. You will be returned to the Force Account Selection page and a number will be assigned to the force account. Click on the Details link by the newly created force account. The Force Account Equipment/Material/ Personnel Selection page is displayed.
5. Click on the Add link by Equipment. The Force Account Equipment Maintenance page is displayed. To enter information for equipment:
 - a. Enter the date the equipment was used.
 - b. Enter the type of equipment.
 - c. Enter the unit number, serial number and capacity. These fields are not required but will help identify each piece of equipment listed on the Force Account Equipment Selection page.
 - d. Enter the bare rate and service charge rate.
 - e. Enter the hours for that day and any standby hours if applicable.
 - f. Click on either the Save or the Save and Add New button.

Clicking on the Save button returns you to the Force Account Equipment/Material/ Personnel Selection page. Enter data for additional equipment by clicking on the Add link and entering the required information.

Clicking on the Save and Add New button saves the data entered and brings up a new entry screen. The date and rental hours will be blank. The equipment information fields will be filled with the last piece of equipment entered. Enter a new date and rental hours or edit the information to add a new piece of equipment. You can also clear any information in the text boxes by clicking on the Clear button.

Additional entries can also be made by going to the Force Account Equipment/Material/ Personnel Selection page and clicking on the Maintain link for Equipment. Click on the Copy link for a specific piece of equipment. The Force Account Equipment Maintenance page with the information for that equipment will be displayed. Edit the date and hours and click on the Save button. A new entry for that equipment will be generated.

6. Click on the Add link by Material. The Force Account Material Maintenance page is displayed. To enter information for material:
 - a. Enter the date the material was used.
 - b. Enter the type of material used.
 - c. Enter the invoice number. This field is not required but can help identify the material on the Force Account Material Selection page.
 - d. Enter the quantity used, unit and unit price of the material.
 - e. Enter the sales tax as shown on the invoice. The tax will be entered as a whole number i.e. six percent is entered as 6.0.
 - f. Click on the Save or Save and Add New Button.

Clicking on the Save button returns you to the Force Account Equipment/Material/ Personnel Selection page. Enter data for additional material by clicking on the Add link and entering the required information.

Clicking on the Save and Add New button saves the data entered and brings up a new entry screen. The date and quantity will be blank. The other material information fields will be filled with the information from the previous entry. Enter a new date and quantity or edit the information to add a new material entry. You can also clear any information in the text boxes by clicking on the Clear button.

Additional entries can also be made by going to the Force Account Equipment/Material/ Personnel Selection page and clicking on the Maintain link by Material. Click on the Copy link for a specific material entry. The Force Account Material Maintenance page with the information for that date will be displayed. Edit the date and quantity and click on the Save button. A new entry for that material will be generated.

7. Click on the Add link by Personnel. The Force Account Personnel Maintenance page is displayed. To enter information for personnel:
 - a. Enter the date the employee worked
 - b. Enter the last name and first name of the employee
 - c. Enter the employee's craft designation and group number as shown on project payrolls
 - d. Enter the hourly wage amount for the employee as shown on the project payrolls
 - e. Enter the Health & Welfare amount if it applies. Not all craft designations have a Health & Welfare amount so if it does not apply to the employee, enter 0 in the text box.
 - f. Enter the straight time and overtime hours for that employee.
 - g. The overtime multiplier has a default value of 1.5. This number can be edited in the event that the employee has any hours paid as double time. Double time entries will be rare but they do occur sometimes especially with certain craft designations.
 - h. Click on the Save or Save and Add New button.

Clicking on the Save button returns you to the Force Account Equipment/Material/ Personnel Selection page. Enter data for additional personnel by clicking on the Add link and entering the required information.

Clicking on the Save and Add New button saves the data entered and brings up a new entry screen. The date, straight time hours and overtime hours will be blank. The last name, first name, craft designations, hourly wage and health & welfare hours will be filled with the last employee information entered. Enter a new date and hours worked or edit the information to add a new employee. You can also clear any information in the text boxes by clicking on the Clear button.

Additional entries can also be made by going to the Force Account Equipment/Material/ Personnel Selection page by clicking on the Maintain link by Personnel. Click on the Copy link for a specific employee. The Force Account Personnel Maintenance page with the information for that date and employee will be displayed. Edit the date and hours and click on the Save button. A new entry for that employee will be generated.

8. After all the daily equipment, material and personnel information has been entered, the force account reports and summary can be printed.
 - a. To print the equipment, material and personnel reports, go to the Force Account Selection page and click on the Details link for the force account. The Force Account Equipment/Material/Personnel Selection page is displayed. Click on the Report link for equipment, material or personnel. A report will be generated and can be printed.
 - b. To print the Summary of Force Account report, go to the Force Account Selection page and click on the Summary link. The Summary of Force Account report will be generated and can be printed.

SECTION 6
QUANTITY BOOK/REPORTS

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SPREADSHEET

A spreadsheet is a table listing a range of tons with corresponding footage representing the distance a particular tonnage must be spread to obtain the required plan quantity.

The quantity per mile for the width, depth and type of material is found on the project plans. This quantity is used to compute tons/foot and feet/ton and these constants are then used to compute the spread. These constants are figured as follows:

The quantity per mile from the plans for a 6" lift of Cl. 5 placed 24' wide is 3312 tons.

$$\begin{aligned} 3312 \text{ tons} / 5280 \text{ feet} &= 0.627 \text{ tons/foot} \\ 5280 \text{ feet} / 3312 \text{ tons} &= 1.594 \text{ feet/ton} \end{aligned}$$

The figure of 1.594 feet/ton is then multiplied by the number of tons in the load.
 $15.0 \text{ tons} \times 1.594 \text{ feet/ton} = 23.9 \text{ feet}$

Create Spreadsheet in CARS

To make a spreadsheet with CARS:

1. On the Main Menu page, choose Spreadsheet from the Reports column. The Spreadsheet Selection page is displayed.
2. Enter the type of material, tons per mile, beginning and ending tons.
3. Pick the project number from the Assigned Project drop down box, type in the project number in project ID box or type in the project control number in the PCN box. Click on the SEARCH button.
4. The spreadsheet report is generated and can be printed.

The spreadsheet will calculate the spread for each tenth of a ton between the beginning and ending range you enter on the Spreadsheet Selection page. The range of tons entered should be broad enough to cover the various capacities of trucks on the project. Give one copy of the spreadsheet to the scale person so the spread can be entered on the haul ticket. The gravel checker should also have a copy in case the spread is inadvertently left off the haul ticket or if the tickets are generated by the contractor's scale. Retain one copy of the spreadsheet in the project files.

QUANTITY BOOK

The quantity book is a detailed report of all pay quantities entered in CARS. These entries are taken from pay quantity reports, haul sheets, mix bitumen reports, piling/test piling reports or concrete paving reports.

The individual contract bid items are displayed in the quantity book in spec and code order and in the same order as listed on the progressive estimate detail sheets. For projects with multiple subprojects, the quantity book will also be divided by subproject.

Source documentation should be noted when quantities are entered. If the source is not displayed it may be necessary to note this by hand on the printed quantity book pages when submitting final records.

Generate the Quantity Book in CARS

To generate a portion or the entire quantity book in CARS:

1. Click on the Quantity Book link. The Quantity Book Selection page is displayed.
2. To generate and print the entire quantity book, leave the beginning and ending spec and codes set to the default values of 001/0001 through 999/9999.
3. To generate and print a section of pay quantities, enter the beginning spec and code for the first item of the section and enter the spec and code for the last item in the range in the ending spec and code. You can also get a section of pay items by typing in the spec number only in the beginning and ending spec text boxes and leaving the codes at their default values. For example, you want to look at all the traffic control pay items in the quantity book. Enter the spec number 704 in the beginning and ending spec text boxes. Leave the beginning and ending code numbers at the default values of 0001 and 9999. Only the pay items under spec number 704 will be generated from the quantity book.
4. The quantity book links displayed on the Quantity Book Selection page can be changed by selecting a project from the Assigned Project drop down list, by entering the project number or entering the PCN.
5. Quantity book reports can be generated by clicking on the subproject links and producing the quantity book for the subproject chosen only. The entire quantity book can be generated by clicking on the All Subprojects link.

REPORTS

Any reports already created using the Maintenance menu can be printed using the Reports menu. The reports for the project shown at the top of the screen will be displayed. Reports for a different project can be accessed by using the Project Search Criteria. Pick the project by using the assigned project drop down list, by entering the project number or by entering the project PCN. Click on the Search button to display the reports.

Display/Generate Reports

The reports are displayed and generated as follows:

1. Concrete Paving, Haul Sheets and Mix Bitumen reports
 - a. Reports are displayed by subproject, spec/code and date order
 - b. Click on the date link to generate the report
2. Piling/Test Piling Reports
 - a. Reports are displayed by subproject, spec/code and structure number
 - b. Click on the structure number to generate the report
3. Change Orders
 - a. Reports are displayed by change order number in descending order
 - b. Click on the change order number to generate the report
4. Force Account
 - a. Reports are listed in descending order by force account number
 - b. Click on the Equipment, Material, Personnel and Summary links to generate the reports
5. Weekly Progress Reports
 - a. Reports are listed in descending order by report number
 - b. Click on the report number link to generate the report.
6. Approved Progressive Estimates
 - a. From the Approve Progressive Estimate Selection page, pick the project using the assigned project drop down list. The project can also be selected by typing in the project ID, project PCN, the contractor vendor number or the estimate released date, if known.
 - b. Choose the number of the approved estimates to display using the Selection Range drop down list.
 - c. Click on the Search button. The estimates are displayed in descending order. All subprojects are listed.
 - d. Generate the estimate details by clicking on the Details link by each subproject or clicking on the All Details link. Click on the Cover link to generate the cover sheet.
7. Contract Time for Completion
 - a. From the Contract Time for Completion Selection page, pick the project from the Assigned Project drop down box, type the project number in the Project ID text box or type the PCN number in the PCN text box.
 - b. Click on the Search button. The Contract Time for Completion will be generated.

Project Status Selection Report

You may also choose to print the Project Status Selection report. This report summarizes all projects that have not been submitted for final payment. The information summarized can be customized to view any one of the eight Districts or to view information for all Districts. You then have the option to display the information sorted by District, Contractor, Bid Opening Date or by Time.

To generate the Project Status Selection Report:

1. From the Main Menu, click on the Project Status Selection link. The Project Status Selection page is displayed.
2. Choose the Project Status Search Criteria from the drop down box. Choose either one district or All to display all information for all districts.
3. Choose the report sort order by clicking in the radio button by the choice of District, Contractor, Bid Opening Date or Time.
4. Click on the Search button and the Project Status Selection report will be generated.

The reports side of the Main Menu also shows reports for the following:

1. Quantity Book
2. Explanation of Change in Plan
3. Final Acceptance Letter

These reports are explained in other sections of this manual.

**SECTION 7
FINAL RECORDS**

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FINALS

When all work is completed on a project, the records are collected, the pay item quantities are checked and a final estimate and other final documents are prepared for a final. The "final" is a summary of 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 Cars Automated Records System (CARS). The project engineer will write a letter to the contractor informing him of any missing required documents (pit releases, receipts of payments, certifications, etc) that must be submitted before final payment is made.

Semi-Final Estimate

When almost all project work is complete or the project cannot be considered complete because of warranty, a semi-final estimate may be created. A semi-final estimate may be created when at least ninety (90) percent of the project work is complete. The retainage on the semi-final estimate may be reduced to not less than one (1) percent of the total dollar amount of work completed after the following conditions have been met:

1. The quantities being paid must be verified by the project engineer to prevent any overpayment to the contractor.
2. All pit quantities have been checked and a signed SFN 14486 Pit Release and Receipt has been received from the contractor.
3. Any required haul road releases (SFN 14458 Road Release Statement) have been received from the contractor.
4. All payrolls for the prime contractor and all subcontractors along with the required certification statements covering the work completed have been submitted.
5. Any remaining work on the project can be completed without an accrual of liquidated damages.
6. The contractor is making a diligent effort to complete work remaining on the project.

It is also possible in CARS to retain a certain dollar amount which represents less than one percent of the total work. This is not to be used without prior authorization from the Construction Services Division or if the Special Provisions for the project allow for the use of a dollar amount for retainage such as for the warranty period on landscaping projects.

Project Final Preparation Status

Upon project completion, 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 can 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 work loads and relay information to the contractor regarding status of the project final.

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.

Consultants, cities and counties may still use SFN 51823 Local Agency Final Checklist to aid in submission of final records.

Final Inspection

A final inspection will be arranged by the owner of the project and conducted for each project. Before final acceptance, 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. All parts of the work will be left in a condition acceptable to the Engineer.

If the inspection discloses any unsatisfactory work, the contractor will be given the necessary instructions in writing for correcting the work. The contractor will immediately comply with those instructions. After all corrections are made, another inspection will be made which will serve as the final inspection.

The final inspection party will include:

1. The owner (the DOT, city or county or their authorized representative)
2. The district engineer (or an appointed representative)
3. The contractor
4. The FHWA shall be invited to the final inspection on full oversight projects.

Final Acceptance

After a satisfactory final inspection, the contractor will be notified in writing of the date the project was inspected and accepted. The owner or authorized representative will write a project acceptance letter to the contractor with copies to the district office. This final acceptance letter should have no stipulations or conditions of acceptance and is to be written immediately upon completion of the work.

The final acceptance letter can be created in CARS.

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.

SUBMISSION OF FINAL RECORDS

When the project is accepted, all project records and documents are gathered for submission of the final.

Pay Quantities

1. All quantities must be entered in the quantity book 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. The final estimate must be printed and included in the final records.

Final Acceptance Letter

A copy of the Final Acceptance letter to the contractor is included in the final.

Project Engineer's Report on Materials Acceptance SFN 10110

All materials incorporated in the project will be listed on this report by contract bid item in spec and code order. The appropriate approval numbers for certifications, shop drawings, testing, etc. are filled in. The completed report is forwarded to the District Materials Coordinator and used to produce the Combined Materials and Project Acceptance Letter. A printed copy of the report is included in the final records

Contract Time Adjustments

The project engineer is responsible for addressing contract time adjustments. Section 108.04 of the Standard Specifications and any supplemental specifications provide for the adjustment of contract time under certain conditions. Either the DOT or the contractor may initiate an adjustment of the contract time.

DOT Initiated Time Adjustments (addressed by change order) – All change orders involving added work and compensation will address contract time whether an adjustment is made or not. Section 108.04 of the Standard Specifications provides guidelines for determining time adjustments. Justifiable increases or decreases in contract time should be included in contract change orders whenever the amount of contract time involved can be determined with reasonable certainty. When creating a change order in CARS, the project engineer is given three options to address contract time which are:

1. No change
2. May be revised if the work affects/affected the controlling operation
3. Will increase/decrease by Calendar or Working days.

If a time extension is necessary for some reason other than additional work or compensation, the extension shall be addressed by the project engineer with a change order. The change order must state the increase or decrease in contract time and the reason for it.

Contractor Initiated Time Adjustments are made using SFN 14461 Request for Additional Time. The contractor must submit the request before expiration of the original or extended contract time.

The project engineer will promptly review any time request received. The contractor must provide sufficient documentation and justification to support their position. A letter will be sent to the contractor to acknowledge that the request was received and if necessary, to ask for additional supporting information. If the request is the result of a suspension or delay, refer to Section 104.05 of the Standard Specifications on how to handle it. If the contractor submits poor or no justification, the request may be denied based on the submitted information.

After reviewing the time extension request, the project engineer will prepare a detailed report of the contractor claimed delays and make a recommendation for action on the time extension. The recommendation should be made on a separate piece of paper not on the Request form.

If the contractor appeals the denial of a time extension, he must do so in writing including the basis for the appeal. The project engineer will advise the contractor to submit all relevant information pertaining to the appeal prior to an appeal hearing.

For NDDOT projects, the project engineer will notify the final approval authority for the original request and arrange a hearing with the contractor. Any new information should be considered and the request reevaluated. After the contractor has been given the opportunity to have a hearing and present his case, a final decision on the time extension request will be made by the highest approval authority for the number of days requested and in all cases, that decision will be final.

For non-NDDOT projects, the project engineer will contact the owner. Any new information submitted by the contractor will be considered and the time extension request reevaluated. The contractor should be notified of the results of the reevaluation. If the owner's action changes, the request will have to be reevaluated for federal aid approval. In all cases, the decision on federal aid eligibility will be made by the DOT at the highest approval authority for the number of days requested and will be final.

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 CARS program will fill the top portion of the report from information gathered in other portions of the program. CARS will automatically sort the change orders where time charges were not addressed and calculate any increase in days. If the project engineer has used the project diary in CARS to assess days charged and reasons for time lost on the project, the lower portion of the Contract Time for Completion will be filled.

To create the Contract Time for Completion in CARS:

1. The project status must be completed and the final estimate generated before the Contract Time for Completion can be made.
2. From the Main Menu, click on the Contract Time for Completion link. The Contract Time for Completion page is displayed.
3. Enter the Liquidated Damages dollar amount per day.

4. The Extra Days Due to Increase Override may be used to adjust the extra days due after the contract time has been generated and the project engineer finds it necessary to adjust the number of additional days granted for contract increases. The override number is determined by adding the number of days for adjustment and the number of days added for contract increases. For example, if the contract increase adds 2 days to the contract and you want to add 3 more days to the contract time, you will enter 5 in the override text box. The override can be used to adjust the number of liquidated damages assessed.
5. A text box is provided for brief remarks if needed. Any adjustment of contract time made with the override must be explained.
6. Check the text box if the working days should be displayed. This will only be required if liquidated damages are being assessed.
7. Click on the Submit button to generate the report.

A printed copy of the Contract Time for Completion is included in the final records.

Project Files and Books

Along with the Project File, the following files and books are submitted with the final records.

1. Materials File – includes all test results, certifications, cutoff reports, etc.
2. Correspondence File
3. Certified Payrolls File – includes payrolls for the prime contractor and all subcontractors
4. Quantity Book
5. Pay Quantity Reports – the pay quantity reports should be filed separately in spec and code order and the reports will be filed in date order within the spec/code section with the most recent date on top. Pay quantity reports should also be separated by subproject.
6. All field books – includes all books used to document and measure quantities.
7. Haul Summary File – contractor generated daily haul summary and weigh tickets are filed and submitted.
8. Inspector's Diaries – all inspector's diaries are filed with the most recent date on top. Diaries may be separated by contractor.
9. Project Diaries – Project diary entries in CARS do not have to be printed and filed. However, if records are kept in a blue Project Engineer's Diary or a field book, they must be submitted as part of the final records.
10. A transmittal letter including a list of all project records and documents submitted for the project final will be made. The letter should indicate if any pit release/receipts or haul road releases are required. Any missing documents should be listed along with measures taken to obtain them.

Narrative Report

The project narrative is a summary of work elements on the project. The narrative is not required on county projects, seal coat projects, thin lift overlay projects, or contract patching projects.

Use the following format for the narrative:

PROJECT NARRATIVE:

PROJECT NUMBER:

DISTRICT:

ENGINEER:

DATE:

TYPE OF WORK:

LOCATION:

CONTRACTOR:

SUBCONTRACTOR:

1. The summary can be in narrative format but must be in the following order:
2. Pre-job and job scheduling comments
3. General explanation of work elements involved
4. Items of work performed by the contractor and each subcontractor
5. The narrative summary should include but not be limited to the following:
 - a. Were there project notes or design changes that should or should not be used on similar projects in the future?
 - b. What changes are needed in the existing design and why?
 - c. Were the project notes adequate or inadequate for the construction and contract administration of the project?
 - d. Were there traffic control problems?
 - e. Were the methods of measurement clearly defined?
 - f. Were the responsibilities and duties of the contractor clear?
 - g. Were problems encountered with the contractor's work force?
 - h. Make final recommendations for future projects of a similar nature
6. Attach a copy of the Explanation of Change in Plan

Statement of Materials Taken from Pits SFN 10061

The Statement of Materials Taken from Pits is used to inform the Materials Division of the material quantities removed from pits and used on a project. These quantities are used to determine how much material may be available for future projects.

Aggregate material will be listed separately by type and include quantities for waste and private use. Aggregates used in bituminous pavements will be calculated by subtracting the tons of oil used from the total mix tonnage. Quantities from all pits used to produce material for the project must be listed and the statement will be submitted with the final records.

Each item is entered in the applicable column depending on whether 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.

Summary of Aggregate Quality Tests SFN 10072

A summary is submitted 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.

DBE Participation Certification SFN 14268

The contractor will submit the DBE Participation Certification as proof of payment to all DBE contractors performing work on the project and listed on SFN 13743 Good Faith

Efforts Review. The form lists both the dollar amount of work proposed and the dollar amount of work actually completed by the DBE contractor on the project.

The DBE Participation Certification form will be filled out by the prime contractor according to the instructions at the top of the form. The prime contractor and the DBE contractor/supplier must both sign the form. All DBE forms for the project will be sent to the project engineer and are included in submission of the final records.

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 107.05 B 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 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 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 insures 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 insure 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.

T.E.R.O 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.

1. The original PE stamped plans will be micro-filmed.
2. Hard copy (paper) as-builts must be sent in with the project final records.
3. Hard copy (paper) as-builts are required for only the plan sheets that have changes.
4. Hard copy (paper) as-builts can be hand drawn or created electronically and printed for micro-filming. Electronically drawn as-builts will not be required

but are acceptable if they are printed for microfilming. If as-built plans are created electronically, see the NDDOT CADD Standards Manual for recommended procedures.

5. Any plan sheet changes created by change order must be included in the as-built plans.
6. Red ink or pencil will not be used for as-builts since it does not show up well on micro-film. All changes to the as-built plan sheets will be made in blue.

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.

Miscellaneous Project Records

Miscellaneous project records such as weigh tickets, profilograph rolls and etc. will be included in the final records. Concrete tickets do not have to be submitted but should be retained at the district until final payment has been made.

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 FHWA. A copy of the combined letter will be attached to the project engineer's acceptance letter and will go with the other records and documents submitted with the final. Copies will also be sent to:

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

The combined project/materials acceptance letter may be used for projects that are 100% State funded or for Transportation Enhancement (TE) projects. The DOT will require a copy of the project engineer's acceptance letter only for TE projects. Projects that are 100% District or State funded will require a copy of the project engineer's acceptance letter and a materials acceptance letter.

On projects that are 100% State funded, The Districts will check the final records except to insure that all required final documents are submitted. For these projects, the district will:

1. Check and verify all final quantities
2. Obtain all pit release/receipts, haul road releases, etc. before submission of the final estimate.
3. Forward the final records to Construction Services to be included in the project file.

REVIEW BY CONSTRUCTION SERVICES

After the district review is complete, all final records and documents will be sent to Construction Services for final review.

The Records Section will review records for accuracy and that they conform to accepted policies and procedures. When checking is complete, a memo listing any discrepancies found, missing documents, etc., will be written 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 copy of the Contract Time for Completion
3. 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 will reflect the owner's position for these items and should be complete.

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.

FINAL PAYMENT

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.

SECTION 8
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NOTICE OF INTENT TO FILE A CLAIM/CONTRACTOR CLAIMS

This section provides guidance for dealing with the receipt of a “Notice of Intent to File a Claim” (NOI) from a contractor and subsequent contractor claims. This section also provides guidance in the review, analysis, resolution and defense of contractor claims.

The Standard Specifications and the current Supplemental Specifications are a part of the contract and provide specifics for handling NOI’s and contractor claims.

The procedures outlined in this section are intended to be used by North Dakota Department of Transportation (NDDOT) personnel and consultants responsible for handling and processing NOI’s and contractor claims on NDDOT construction projects. These are meant to be general guidelines only. Each NOI and contractor claim is unique and may require variations of these procedures.

This section is not part of any NDDOT contract. In the case of a discrepancy between contract documents and this section, the contract documents shall govern.

NOTICE OF INTENT

Reasons for requiring an NOI include, but are not limited to, the following:

- Allows the engineer the opportunity to keep strict account of the actual costs of any alleged extra work. North Dakota Century Code requires that the contractor “. . . afford the engineer facilities and assistance in keeping strict account of actual costs. . .” on the work performed.
- Permits early investigation by the owner into the conditions identified in the notice while evidence is still readily available.
- Allows the owner to consider construction alternatives to limit, or altogether eliminate, additional costs.

1. Receipt of a Notice of Intent to File a Claim

A. Initial Response

North Dakota Century Code Title 24 and Section 104.06 A of the Standard Specifications requires submission of a written NOI if the contractor contends that additional compensation is due for work and/or material not clearly covered in the contract. Prior to beginning the work on which the claim will be based, the contractor must immediately notify the engineer in writing of the intent to make a claim for additional compensation. If the basis of the claim is not apparent until the contractor has started the work and it is not practical to

stop the work, the contractor will immediately notify the engineer that the work is continuing and a written NOI must be submitted within ten calendar days. NDDOT specifications require that the NOI be submitted on SFN 16743 Notice of Intent to File a Claim.

Upon receipt of an NOI, the project engineer will notify and send a copy of the submitted paperwork to the Construction Services Division. The project engineer will review the NOI to ensure it is complete and the notice items are clearly defined. The engineer should acknowledge receipt of the NOI from the contractor indicating the date it was received.

In some cases the claim items in the NOI may not be clearly defined or the NOI may be incomplete. This makes it difficult if not impossible for the engineer to monitor and investigate the situation. The NOI should then be returned to the contractor with a cover letter from the engineer indicating the date of receipt and requesting that the NOI be properly submitted with, if applicable, additional information. If appropriate, the engineer may want to address such issues as timeliness of filing the NOI, agreement, partial agreement or disagreement with the issues outlined in the NOI.

B. Documentation

Subsequent to an NOI being received from the contractor additional documentation of field conditions may be required to measure any possible impacts. Project personnel should be aware when conditions on the project have changed, are different from conditions anticipated in the plans, or are different from what would be expected in the normal course of performing a type of work. Project supervisors should keep the district administration informed about issues arising on the project.

Pictures and videos are important record keeping methods and should be utilized by project personnel whenever a claim or potential claim situation arises on a project. Sufficient photos and video footage should be taken of the area in question to completely describe the situation pictorially. The photos and videos may also include other work being performed by the contractor.

The date, time and location of pictures or video footage taken should be logged in the project records. The printed name, title and signature of the person taking the pictures or video footage should also be included in the applicable project records. A description of what each photo is showing, the date, time and project number should be noted on the back of each photo. Video footage should be narrated and should include the project number, date, time, location, a brief description of the situation and the name of the person taking the video. If the still and/or video camera have a date/time stamp, it should be set and incorporated into the media.

Thorough documentation of a claim includes a list of all the contractor's equipment, material and manpower. After notice is received, whether verbally or in writing, field personnel must immediately begin recording all aspects of the contractor's operation. At a minimum, these records should document exact working hours for the execution of the work by the contractor including any down time and should note any inefficiencies.

In addition to the normal diary entries, keeping a daily equipment list is recommended for documentation of the contractor's equipment and manpower. Important items in documentation of the contractor's equipment are:

- ▶ An accurate record of working hours
- ▶ The item of work performed during those hours by each piece of equipment
- ▶ The location of the work performed
- ▶ Any down time hours for idled equipment.
- ▶ Detailed information on the equipment to include type, year, make, and model.

Attachment 1 at the end of this section is a "Contractor Daily Equipment and Labor" worksheet. This worksheet may be used by project personnel to record the contractor's daily equipment usage and labor hours.

Claims that involve state optioned pits require extra documentation. If it becomes apparent that a state optioned pit may not yield the quality and/or quantity shown in the pit plats, field personnel should notify the Materials and Research Engineer and the Construction Services Division. In addition to keeping track of the contractor's operation as outlined previously, the District Materials Coordinator will immediately go to the pit and take samples of the material produced. If the problem in the pit continues, additional samples will be taken in order to document the quality of unprocessed and processed material. Attachment 2 at the end of this section, "Contractor Daily Equipment, Labor, and Materials – Crushing / Aggregate Production", can be used for recording the crushing operation.

If there is any question as to what needs to be accounted for in keeping strict account of the contractor's work, section 104.06 B outlines how a contractor is to price out a claim when it is submitted to the department for consideration of payment.

C. Review of the NOI

The NOI should be reviewed using the 4 steps outlined in section 3.B "Detailed Review and Analysis of the Claim."

2. Response to the NOI

A. Agree/Partially Agree with the NOI Issue

If After the issues outlined are reviewed and analyzed it is determined that the contractor's NOI has merit, the NDDOT may choose to meet with the contractor to attempt negotiation of a settlement.

The authority to settle an NOI issue or contractor's claim is as follows:

- ▶ Project Engineer – Less than or equal to \$10,000
- ▶ District Engineer – More than \$10,000 but less than or equal to \$50,000
- ▶ Director of Operations or Deputy Director of Engineering – Greater than \$50,000

These authorities may be revised by a higher authority on a specific issue. Items that fall within the administrative authority of the Project Engineer, District Engineer or Director of Operations will be referred to higher levels when the proposed resolution is rejected by the contractor.

B. Settlement of the NOI Issue

If negotiations are successful and a settlement is reached, a change order is prepared detailing the terms of the settlement. Documentation for the change order must include sufficient detail to justify the amount of the settlement and at a minimum, must include the analysis used to assign and determine damages. The change order should include a release clause to protect the NDDOT from any further liability or claims regarding the issues outlined in the NOI. Attachments 3-5 at the end of this section show examples of different types of release clauses which have been used on NDDOT projects. These may be used by project personnel as a basic template but the wording may need to be modified to fit the given situation.

C. Disagree with the NOI Issue

After the issues outlined are reviewed and analyzed and it is determined that the contractor's NOI does not have merit, the engineer will respond appropriately to the contractor. The response should list each item in the NOI and the reason the NDDOT does not agree that additional compensation is due. This should be done by using the contract documents to justify the department's position. If the issues in the NOI are ongoing and NDDOT personnel must continue keeping strict account of the contractor's work to protect the state's interests, the engineer should request that the NOI be formally rescinded in writing by the contractor. If the contractor refuses to rescind the NOI, then the issues are not resolved and project personnel should continue keeping strict

account of the contractor's work until all work related to the issues outlined in the NOI are complete.

D. Unresolved NOI Issue

If an NOI remains unresolved, it is critical that project personnel continue keeping strict account of the contractor's work until all NOI related items of work are complete. Once this is done, the records should be filed and categorized so they are easily retrievable later. The file should also include copies of any previous correspondence, evaluation, analysis, or any other work done in connection with the NOI. If the contractor does file a claim related to the NOI, these records will be key in evaluating the contractor's claim, formulating the Department's position in response to the claim, and ultimately in preparing and executing the defense should the claim go to arbitration.

CLAIMS

Section 104.06 of the Standard Specifications is the governing specification for a contractor who submits a claim to the NDDOT. A contractor submitting a claim must do so no later than 90 days after receiving the final estimate from the department.

1. Receipt of a Claim

Upon receipt of a contractor claim the engineer should ask the following questions to assure that the contract provisions regarding a claim submittal have been met:

- ▶ Was a proper and timely NOI filed by the contractor which covered the issues outlined in the claim?
- ▶ Was the claim properly submitted in writing no later than 90 days after the final estimate was submitted to the contractor?
- ▶ Does the claim meet the requirements of a properly submitted claim as outlined in section 104.06 of the standard specifications?
- ▶ Were the bid documents submitted with the claim as required by specification 104.06 of the standard specifications?

If a claim is not properly submitted, the project engineer will respond immediately to the contractor stating that the claim has not been properly submitted and the reasons for that determination. The contractor should also be informed that the 60 day time period for claims < \$3M and 180 day time period for claims ≥ \$3M for the Department to respond will not begin until a claim is properly submitted. If the claim is properly submitted, the department must respond with its position within the above stated time periods upon receipt of the claim. The Construction Services Division should be notified when an NOI or claim has been submitted by a contractor.

2. Review and Analysis of the Claim

There are four basic steps to use in the review, analysis and resolution of a contractor claim. These steps should be used for all levels of review beginning with the project engineer. The four steps are:

- A.** Determine whether or not a change has occurred. Is there a difference between what was required by the contract and what was required during the course of construction? If the answer is no, then that is the owner's position. Go to step 2 if the potential answer is yes.
- B.** Determine who caused the change or who has liability for the change, the owner or the contractor. If it is determined that the owner caused or is liable for the change, go to step 3.
- C.** Determine the impacts of the change. Impacts include but are not limited to the following: extra work, delays, reduced efficiency, increase costs of material, unused material, etc.
- D.** Determine damages (dollar amount, increased contract time, etc.) to which the contractor may be entitled. If the impacts are clearly defined, determination of damages is much easier to do.

These four steps should always be followed in sequence. The contract documents (plans, proposal, specifications) should always be used in conjunction with the four step review. The decision on whether or not the contractor is due additional compensation or contract time depends on the deviation, or lack of deviation, between the work and requirements outlined in the contract documents and the work actually performed by the contractor.

The contractor's claim submittal should match the items that were identified in the original NOI for the claim. The claim is reviewed to check merit, validity and adherence to the contract documents. Any NOI related records kept during the project should be retrieved and used to facilitate the review.

3. Response to the Claim

In formulating a response to, and conducting negotiations of the claim the Construction Services Division should be kept informed of all details. Additionally, the Construction Services Division is available to provide guidance to the district in these matters.

A. Agree/Partially Agree With the Claim

If, after the review and analysis of the supplemental information submitted by the contractor, it is determined that the claim has merit, the NDDOT may

choose to meet with the contractor to attempt negotiation of a settlement. The intent is to negotiate the claim at the project or district level, if possible.

The authority to settle a claim is the same as that for an NOI. However, due to the statewide significance of any claim settlement and the importance of uniformity in decisions, all settlement agreements over \$50,000.00 must be made in consultation with the Construction Services Division.

Claims referred to the Construction Services Division for review and action must be accompanied by the pertinent data, reports and findings. Additional meetings with the contractor, either with or without legal counsel, may be arranged. District personnel will be asked to attend these meetings and furnish any supporting data that may be needed. Any audits of the contractor's records necessary to verify submitted data will be arranged by the Construction Services Division.

Claims that cannot be resolved by the Director of Operations may be forwarded to the Deputy Director for Engineering or to the Director for a final attempt at resolution. If a claim that cannot be resolved, the contractor's next step is to file for arbitration in accordance with North Dakota law.

B. Settlement of a Claim

If negotiations are successful and a settlement is reached, a change order is prepared in the same manner as that for the settlement of an NOI. As with an NOI, documentation for the change order must contain sufficient detail to justify the amount of the settlement. The change order should include a release clause the same as that shown for the settlement of an NOI.

C. Disapproval of a Claim

When the issues outlined in the contractor's claim are found to be without merit, the NDDOT must respond in writing within 60 days of receipt of the claim for claims < \$3M and 180 days for claims ≥ \$3M and inform the contractor that the department disagrees with the items outlined in the claim. The response may include an itemized list of the issues contained in the claim and the department's justification for rejecting the contractor's request for additional compensation. The contractor's next option is to file for arbitration.

4. Arbitration

If the contractor does not accept the response by the department on the issues presented in the claim, a demand for arbitration may be filed by the contractor.

James Acret in the *“Construction Arbitration Handbook”*, Shepard’s/McGraw-Hill, © 1985, defines arbitration as:

“Arbitration is a system, voluntarily adopted by parties to decide their disputes, in which an impartial arbitrator, after hearings, issues a legally enforceable award.”

Arbitration is required by North Dakota Century Code for:

“All controversies arising out of any contract for the construction or repair of highways entered into by the director (of the NDDOT)...“

North Dakota Century Code requires that in cases less than \$100,000 dollars, one arbitrator will be appointed to hear the case. In cases of \$100,000 or more, three arbitrators will comprise a panel to hear the case. If the contractor does choose to file for arbitration and legal counsel has not already been employed by either party, it is likely that both sides will now hire attorneys to assist in their case.

5. Claims Against Contractors – External Claims

External claims are defined as those made against a contractor by parties other than the NDDOT.

Claims made against a contractor by third parties for materials, supplies, services, equipment or labor shall be referred to the Construction Services Division. Other than informing the claimant that these claims should be submitted to Construction Services, district employees should not provide any advice.

When the Construction Services Division receives the written claim, a letter will be sent to the claimant citing the requirements of law which must be followed in filing a claim against the contractor. The letter shall provide the claimant with the name of the contractor’s bonding company and the resident agent. Copies of the NDDOT’s letter to the claimant along with a copy of the written claim shall be sent by the Construction Services Division to the contractor and the bonding company.

Contractor Daily Equipment and Labor

Project Number:

Contractor:

Date	Equipment							Labor				Remarks
	Type	Hours		Total Hours	Item of Work	Location	Standby Hours	Name	Hours		Total Hours	
		Begin	End						Begin	End		

Contractor Daily Equipment, Labor, and Materials – Crushing / Aggregate Production

Project Number:

Contractor:

Date	Equipment							Labor				Remarks
	Type	Hours		Total Hours	Item of Work	Standby Hours	Down Hours	Name	Hours		Total Hours	
		Begin	End						Begin	End		

Samples Taken (Y/N) _____

Sample Reference Number _____

Amount of Product Produced In 24 Hours _____

Amount of Waste Produced In 24 Hours _____

Inspector:

Attachment 2

NOTICE OF INTENT TO FILE A CLAIM SETTLEMENT AGREEMENT

The Contractor, _____, by the signing of this agreement certifies that:
Upon execution of change order number ____ any and all claims in any manner
arising out of, or pertaining to, the attached Notice of Intent dated _____, filed on
Project No. _____, including but not limited to such issues as;

have been satisfied in full and the State of North Dakota is released and discharged
from any claims or extra compensation in any manner arising out of the referenced
Notice of Intent.

NDDOT Representative Date _____ Representative Date

Printed Name Printed Name

Attachment 3

NOTICE OF INTENT TO FILE A CLAIM SETTLEMENT AGREEMENT

The Contractor, _____, by the signing of this agreement certifies that:
Upon execution of change order number ____ in the amount of \$_____ any and
all claims in any manner arising out of, or pertaining to, Project No. _____
(including but not limited to the notice of intent to file a claim in regards to;

)

have been satisfied in full and the State of North Dakota is released and discharged
from any claims or extra compensation in any manner arising out of
Project No. _____.

NDDOT Representative Date

Representative Date

Printed Name

Printed Name

NOTICE OF INTENT TO FILE A CLAIM SETTLEMENT AGREEMENT

The Contractor, _____, by the signing of this agreement certifies that:
Upon execution of change order number ____ ____ reducing the total days of liquidated damages charged to ____ days any and all claims in any manner arising out of, or pertaining to, Project No. _____ (including but not limited to the notice of intent to file a claim and time extension in regards to;

)

have been satisfied in full and the State of North Dakota is released and discharged from any claims or extra compensation in any manner arising out of Project No.

NDDOT Representative Date

Representative Date

Printed Name

Printed Name

FOR A COPY OF THE LATEST NOTICE OF INTENT TO FILE A CLAIM

Click on the following link [NOTICE OF INTENT TO FILE A CLAIM - SF 16743](#)

LIST OF CLASSIFICATIONS OF CONSTRUCTION CLAIMS

The following is a list of the classifications of construction claims as shown in the 'Construction Claims Guide' published by Wagner, Hohns, Inglis, Inc.

CONSTRUCTIVE CHANGES

Changes resulting from acts attributable to the owner which cause more work or more time on the job than planned, but for which the owner refuses to execute formal change orders.

1. Work out of Sequence
Work in a different order than originally planned.
2. Change in Method
A change in the way of doing the work on a project.
3. Over Inspection
Inspector demands work quality higher than normal industry standard or requires special operations.
4. Defective Drawings
Errors, omissions, or ambiguities occurring in the drawings.
5. Higher Standards
Requires higher quality work than called for in the specifications.
6. Non-Disclosure
Failure to provide all available information. Usually relates to information known by the designers but not made a part of the contract documents.
7. Impractical or Impossible
Work physically impossible to perform or economically impractical.

ACCELERATION

When the owner orders completion of the project sooner than required by the contract or orders work finished on the original completion date failing to grant time extensions which are due.

1. Directed Acceleration
Order to complete prior to contract completion date.

2. Constructive Acceleration
Insistence on the original schedule despite entitlement to time extension.

CHANGED CONDITIONS

Conditions other than what a prudent person would have expected.

1. Type I
Subsurface of latent physical conditions differing materially from those indicated in the contract.
2. Type II
Unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered in work of the character provided for in the contract.

SCHEDULE CHANGE

A change in the time or sequence of the schedule to complete a project.

1. Suspension
Work stoppage for one party's benefit.
2. Termination
Defaulted for bad work or failure to perform. If for Owner's convenience, profits on work completed and cost of demobilization permitted.

DELAYS

There are three types of delays: delays which are the responsibility of the owner, delays which are the responsibility of the other party, and delays which are beyond the control of either party.

1. Owner Caused
 - a. Lack of access
 - b. Owner interference
 - c. Directed reduction in manpower
 - d. Directed slowdown
2. Designer Caused
 - a. Late shop drawing approval
 - b. Design error
 - c. Failure to accept
3. Contractor Caused

- a. Rework
 - b. Lack of productivity
 - c. Procurement failures
-
- 4. Force Majeure
 - a. Hurricanes
 - b. Tornadoes
 - c. War

MISCELLANEOUS

Claims which do not fall into any of the above categories.

- 1. Material Breach
Violation of an important contract obligation
- 2. Refusal to Accept Completed Work
Owner refuses to takeover completed work and Contractor is forced to maintain and protect the work.
- 3. Early Occupancy
Owner moves into facility and interferes with the Contractor.
- 4. Change in Scope
Project's purpose is altered or increased significantly.
- 5. Cardinal Change
Owner alters a project radically.

It is important to become familiar with the different types of claims to better recognize a claim situation as it is happening.

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CARS REPORTS

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SFN 10061	Statement of Material Taken From Pits
SFN 10072	Aggregate Quality Test Summary
SFN 10110	Project Engineer's Report on Materials Acceptance
SFN 13420	Report of Bridge Bench Marks and Check Points
SFN 13890	Equipment Rental and Wage Rates Agreement
SFN 13891	Request for Equipment Rental Rate Determination
SFN 13986	Weekly Payrolls
SFN 14268b	DBE Participation Certification
SFN 14458	Road Release Statement
SFN 14461	Contractor Request for Extension of Contract Time
SFN 14486	Pit Release Statement
SFN 14634	Traffic Control Watchperson Report
SFN 16082	Earthwork Computations & Shrinkage
SFN 16474	Seeding Quantity Sheet
SFN 16743	Notice of Intent to File a Claim
SFN 58543	Fuel Cost Adjustment Worksheet
SFN 51823	Local Agency Final Checklist
SFN 52243	Subcontractor Registration

North Dakota Department of Transportation
Weekly Construction Progress Report Number 2
Week Ending 12/14/2002

Contractor: NORTHERN IMPROVEMENT CO
 Type of Work: GRADE, SURF., LIGHTING & INCIDENTALS
 Contract Amount: \$ 12,617,504.90

Project: STI-IM-1-094(014)156
 County: Burleigh
 Work Completed: 4,307,217.58 Complete: 34.14%

Working Day Contract

Completion Date Contract

Allowable Working Days:
 Time Charge Started:
 Working Days Charged This Week:
 Working Days Charged to Date:
 Percent of Time Expired:

Contract Completion Date: 11/2/2003
 Calendar Days From Start to Completion Date: 368
 Calendar Days Expired: 45 Time: 12.23%
-- WITH GUARANTEED WORKING DAYS--
 Guaranteed Number of Working Days:
 Time Charged Started:
 Working Days Charged This Week:
 Working Days Charged to Date:

Items of Work	Portion of Structure or Location of Work	% Completed Last Report	% Completed to Date	% of Contract
General Provisions		20.15	20.15	0.56
Removals & Earthwork		267.00	267.02	8.58
Bases		4.68	4.68	12.89
Bituminous Pavements		16.31	16.31	3.53
Concrete Pavements		8.99	8.99	36.19
Structures		38.54	39.10	13.68
Drainage		3.84	3.84	4.73
Guardrail		0.08	0.08	0.53
Erosion Control		13.12	13.12	1.54
Mobilization & Traffic Control		6.90	6.90	4.83
Concrete Work		1.50	1.50	2.71
Water & Sewer		9.43	9.43	0.70
Misc.		100.00	100.00	0.04
Fencing		0.00	0.00	0.03
Signing, Lighting, Signals		4.46	4.51	8.97
900 Provisions		17.16	17.16	0.42

REMARKS

Working on many things

DBE Inc. working on sidewalks

	SUN	MON	TUE	WED	THU	FRI	SAT
Working Days Charged This Week:	0.0	1.0	1.0	0.0	0.0	0.0	0.0
Actual Days Worked This Week:	0.0	1.0	1.0	0.0	0.0	0.0	0.0

The contractor will be allowed 7 calendar days after the last day of the week covered by this report to file a written protest if he disagrees with the time charges. (SPEC 108.04.1)

CONSTRUCTION OFFICE
 DISTRICT OFFICE
 CONTRACTOR
 FILE

APPROVED BY _____
 (FOR CONTRACTOR)

SUBMITTED BY _____
 (PROJECT MANAGER)

North Dakota Department of Transportation

*** Test Pile Log ***

Project No: STI-IM-1-094(014)156

PCN: 51

Date: 12/12/02

Subproject: 7 - STRUCTURAL & INCIDENTAL CODE Y046

Material: STEEL TEST PILING HP 12 X 53

Contractor: NORTHERN IMPROVEMENT CO

Location Data:

Bridge No: 94-326.444L
 Station: 103942.00
 Abut./Pier No: 1
 Pile No: 1
 Date Driven: 12/12/2002
 Start Time: 13:00
 Stop Time: 15:00
 Engineer: Fercho

Hammer Data:

Make/No: Delmagd19-32
 Rated Energy:
 Wt. of Striking Parts: 4190
 Rated Stroke:
 Rated Speed:

Accessory Data:

Cap Type: Steel
 Cushion: Rubber
 Cap Wt.: 890
 Adapter Wt.: 0
 Total Head Wt.: 890

Pile Data:

Design Load: 56.08
 Wt. Per Lin. Ft.: 53.00

Pile Lengths

Pay and Plan Length: 75.000
 Length 1: 50.10 Cutoff 1: 0.40
 Length 2: 40.10 Cutoff 2: 6.20
 Actual Length: 83.60

Distance Below Bottom Footing	Observed Stroke	Energy	PENETRATION DATA			Computed Bearing Value
			No. of Blows	Inches Penetration	Penetration Per	
36.00						
37.01	5.25	16500	34	12.15	0.357	32.81
38.01	5.00	16500	35	12.00	0.343	33.69
39.01	5.00	16500	35	12.00	0.343	33.69
40.01	5.00	16500	37	12.00	0.324	34.88
41.01	5.00	16500	40	12.00	0.300	36.58
42.01	5.00	16500	46	12.00	0.261	39.68
43.01	5.00	16500	53	12.00	0.226	42.89
44.01	5.00	16500	54	12.00	0.222	43.31
45.01	5.00	16500	56	12.00	0.214	44.14
46.01	5.00	16500	60	12.00	0.200	45.72
47.01	5.00	18150	55	12.00	0.218	48.10
48.01	5.00	18150	55	12.00	0.218	48.10
49.01	5.00	18150	55	12.00	0.218	48.10
50.01	5.00	18150	55	12.00	0.218	48.10
51.01	5.00	18150	55	12.00	0.218	41.07
52.01	5.00	16500	65	12.00	0.185	40.59
53.01	5.00	16500	72	12.00	0.167	42.58
54.01	5.00	16500	75	12.00	0.160	43.37
55.01	5.00	16500	75	12.00	0.160	43.37
56.01	5.00	16500	75	12.00	0.160	43.37
57.01	5.00	16500	81	12.00	0.148	44.84
58.01	5.00	16500	91	12.00	0.132	47.04
59.01	5.00	16500	91	12.00	0.132	47.04
60.01	5.00	16500	91	12.00	0.132	47.04
61.01	5.00	16500	91	12.00	0.132	47.04
62.01	5.00	16500	98	12.00	0.122	48.42
63.01	5.00	16500	100	12.00	0.120	48.79
64.01	5.00	16500	100	12.00	0.120	48.79
65.01	5.00	17325	97	12.00	0.124	50.64
66.01	5.00	17325	97	12.00	0.124	50.64
67.01	5.00	17325	103	12.00	0.117	51.79
68.01	5.00	18150	96	12.00	0.125	52.84
69.01	5.00	18150	110	12.00	0.109	55.56
70.01	5.00	18150	110	12.00	0.109	55.56
71.01	5.00	18150	117	12.00	0.103	56.76
72.01	5.00	18975	110	12.00	0.109	58.09
73.01	5.00	18975	110	12.00	0.109	58.09

North Dakota Department of Transportation
***** Test Pile Log *****

Project No: STI-IM-1-094(014)156

PCN: 51

Date: 12/12/02

Subproject: 7 - STRUCTURAL & INCIDENTAL CODE Y046

Material: STEEL TEST PILING HP 12 X 53

Contractor: NORTHERN IMPROVEMENT CO

Distance Below Bottom Footing	Observed Stroke	Energy	PENETRATION DATA			Computed Bearing Value
			No. of Blows	Inches Penetration	Penetration Per	
74.01	6.00	19800	105	12.00	0.114	59.61
75.01	6.00	19800	120	12.00	0.100	62.45
76.01	6.00	19800	145	12.00	0.083	66.26
77.01	6.00	19800	165	12.00	0.073	68.69
78.01	6.00	19800	175	12.00	0.069	69.76
79.01	6.00	20625	215	12.00	0.056	76.29
79.89	6.00	20625	210	10.50	0.050	78.06
80.43	6.00	20625	130	6.50	0.050	78.06
80.60	6.00	20625	40	2.00	0.050	78.06
80.68	6.00	20625	20	1.00	0.050	78.06
80.72	6.00	20625	10	0.50	0.050	78.06
80.76	6.00	20625	10	0.50	0.050	78.06

North Dakota Department of Transportation
***** Log of Pile Driving*****

Project No: STI-IM-1-094(014)156

PCN: 51

Date: 6/27/95

Subproject: 3 - DIVIDE AVE.

216 FT. OVERALL LENGTH PRESTRESSED CONC. GIRDER BRIDGE

STRUCTURAL & INCIDENTAL CODE X781

Material: STEEL PILING HP 14 X 73

Contractor: NORTHERN IMPROVEMENT CO

PILE

Weight/LF: 53.00
 Req'd Pen: 40.00
 Required Bearing: 70.00
 Average Pen.: 114.40

HAMMER

Type: Diesel
 Make/Size: Delmagd19-32
 Driving Head: 890
 Cap Type: Steel
 Date Driven: 06/27/1995
 Wt. Of Striking Parts (RAM): 4190

LOCATION

Bridge No.: 161.433
 Station: 20.60
 Abut./Pier No.: 5
 Engineer: Fercho

Pile No.	Added Length	Cutoff Length	Final Added Length	Final Length in Place	OBS. Stroke	OBS. Blows Per Min.	Energy	No. of Blows	Inches Penetration	Aver. Per Blow	Bearing
1	40.00	0.00									
	40.00	0.00									
	40.00	1.30									
			10.00	128.70	7.52	60	31425	10	1.750	0.175	72.3
2	40.00	0.00									
	40.00	0.80									
	40.00	1.60									
			0.00	117.60	7.00	60	31425	10	1.750	0.175	72.5
3	40.00	0.00									
	40.00	0.30									
	40.00	0.80									
			0.00	118.90	7.00	60	31425	10	1.750	0.175	72.4
4	40.00	0.00									
	40.00	0.40									
	40.00	5.50									
			0.00	114.10	7.00	60	31425	10	1.500	0.150	77.5
5	40.00	0.00									
	40.00	0.70									
	40.00	12.40									
			0.00	106.90	7.00	60	31425	10	1.750	0.175	72.4
6	40.00	0.40									
	40.00	0.50									
	40.00	18.90									
			0.00	100.20	7.00	60	31425	10	1.750	0.175	72.5
Totals	720.00	43.60	10.00	686.40					Average Bearing:		73.3

Pay Quantity: 686.40

**North Dakota Department of Transportation
Mix Bitumen Cut-Off Report - Report Number 3**

(Covering Period from 08:00 11/22/1995 to 21:00 11/22/1995)

Project: STI-IM-1-094(014)156

PCN: 51

Subproject: 1 - GRADE, SURF. LIGHTING & INCIDENTALS
CODE J000

Material: 120-150 ASPHALT CEMENT

Contractor: NORTHERN IMPROVEMENT CO

BITUMEN IN STORAGE (Begin this Report)

Unit Weight Data @ 60 Deg F
(From Refinery/Testing Lab)

Tank No	Hot Gallons	Temp F	Vol Corr Factor	Gallons @ 60 Deg F	Specific Gravity lbs/gal	1.0450 (SG X 8.33)
1	6,950	300	0.9187	6,385	8.7048	

(Total Gals @ 60 Deg F 6,385) X (8.7048 lbs/gal / 2,000) = 27.790 tons

BITUMEN DELIVERED (This Report)

Ticket No	LBS	Ticket No	LBS	Ticket No	LBS
1	35,000	2	45,000	3	56,580
4	58,320	5	35,420	6	45,690

(Total Bitumen Delivered = 276,010 LBS) / 2,000 = 138.005 tons

BITUMEN IN STORAGE (End This Report)

Tank No	Hot Gallons	Temp F	Vol Corr Factor	Gallons @ 60 Deg F
1	14,000	280	0.9253	12,954

(Total Gals @ 60 Deg F 12,954) X (8.7048 lbs/gal / 2,000) = 56.380 tons

BITUMEN USED FOR OTHER THAN MIX

(Tack, Fog, Non-Pay/Priv. Use, Waste, Etc)

(0) X (8.7048 lbs/gal / 2,000) = 0.00 tons

BITUMEN USED FOR ALL MIX PRODUCED (This Report)

= 109.410 tons

WET MIX PRODUCED (This Report)

(Pay Qty. 1,832.500 tons) + (Waste, Non-Pay/Priv. Use 42.000 tons) = 1,874.500 tons

Average Percent Bitumen in Wet Mix = 5.84%

Waste, Non-Pay/Private Use Bitumen for Mix = 2.452 tons

Estimated Net Pay Quantity Bitumen for Mix = 106.962 tons

Remarks:

North Dakota Department of Transportation
Daily Report of Concrete Paving - 1

Page 1 of 1

Project: STI-IM-1-094(014)156

PCN: 51

Date: 01/07/2003

Subproject: 1 - GRADE, SURF. LIGHTING & INCIDENTALS
 CODE J000

Material: 8IN NON-REINF CONCRETE PAVEMENT CL AE

Contractor: NORTHERN IMPROVEMENT CO

Concrete Mix Data (Design Batch Size 1 C.F.)

Fly Ash:	1,000.00 LBS.	Moisture Content	
Cement:	1,552.00 LBS.		
Sand:	1,213.00 LBS.	Sand Moisture:	0.00% 0.00 LBS.
Recycled Rock:	6,548.00 LBS.	Recycled Rock:	0.00% 0.00 LBS.
Virgin Rock:	156.00 LBS.	Virgin Rock:	0.00% 0.00 LBS.
Recycled Sand:	321.00 LBS.	Recycled Sand:	0.00% 0.00 LBS.
new stuff:	654.00 LBS.	new stuff:	0.00% 0.00 LBS.
new stuff:	545.00 LBS.	new stuff:	0.00% 0.00 LBS.
Total Water:	25.00 LBS.	Total Water in Aggregate:	0.00 LBS.
Total Weight Per Batch:	12,014.00 LBS.	Water Added:	25.00 LBS.
Field Weight of Mix:	142.00 LBS.	Yield = Total Wt. / Field Wt. =	84.61 C.F./BATCH
W/C Ratio:	0.010	Fly Ash Content = (27 * Sacks/Batch) / Yield =	3.39 SACKS/C.Y.
Air Entrained:	5.80%	Cement Content = (27 * Sacks/Batch) / Yield =	5.27 SACKS/C.Y.

Paving Data

Time Started	07:00	Time Stopped	12:00	Actual Pouring Time in Hours	5.00
Delays (Station, Duration, Reason):					
C.Y. Used:	119.00	C.Y. Wasted:	1.73	Total C.Y.:	120.73
Start Station:	251.00	End Station:	325.00	Added Sq. YDS Paved:	0.000

		Width of Paving	28.00 Feet
Linear Feet Paved:	74.00 L.F.	Square yards Paved	230.222 S.Y.
Plan Computed C.Y. Poured:	57.56 C.Y.	(S.Y. paved * 9.00 inches thickness / 36)	
Actual C.Y. Poured:	362.95 C.Y.	(Number of C.Y. used * yield / 27)	
Difference	-305.39 C.Y.	*Overrun	0.00% **Underrun 530.61%

* Overrun when computed yardage exceeds actual yardage
 ** Underrun when actual yardage exceeds computed yardage

Remarks:

Copies: Testing Laboratory
 Contractor

North Dakota Department of Transportation
Report of Material Hauled
Haul Sheet # 1

Project: STI-IM-1-094(014)156

PCN: 51

Date: 06/01/1995

Subproject: 1 - GRADE, SURF, LIGHTING & INCIDENTALS
 CODE J000

Material Hauled: AGGREGATE BASE COURSE CL 3

Contractor: NORTHERN IMPROVEMENT CO

Subcontractor:

Pit or Plant Location: Northern's plant
County: Burleigh

TRK	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	TOTAL	
126	24.10	24.00	24.40	24.20	25.70	24.70	25.60	23.10	24.80	23.60	23.60	24.90	26.00									318.70
127	23.60	23.20	24.20	24.30	25.30	24.80	25.00	24.30	25.00	25.20	24.70	24.20										293.80
19	24.20	22.90	23.60	24.30	23.80	25.70	24.30	24.10	25.60	24.20	25.40	25.60	22.90									316.60
195	25.00	24.30	23.10	25.00	25.30	24.20	24.90	25.30	24.40	25.20												246.70
21	25.80	25.60	24.70	23.70	24.20	24.50	23.80	23.50	25.40	23.90	23.20	24.30	24.20									316.80
24	24.20	24.00	25.30	24.30	24.10	24.80	23.30	23.70	24.90													218.60
242	25.70																					25.70
25	26.90	24.00	23.20	24.40	25.10	25.20	24.70	23.70	24.80	24.40	25.10	23.10	24.20									318.80
26	23.30	23.70	24.40	25.10	25.10	24.40	24.00	24.30	24.30	23.80	23.30	23.20										288.90
28	23.60	24.60	23.10	22.60	24.10	24.20	24.20	24.30	24.40	22.20	23.60	22.70	23.20									306.80
521	20.10	20.50	18.10	19.10	19.50	19.40	21.00	22.40	19.90	20.70	20.80	21.60	22.50									265.60
522	23.00	19.80	19.00	18.30	21.50	20.10	20.90	20.70	19.60	20.80	25.00	20.40	19.80									268.90
523	23.80	23.90	22.50	23.00	24.60	23.60	25.10	24.30	25.00	23.50	25.00	24.80	24.40	24.00								337.50

Haul Sheet Total: 3,523.40

Starting Ticket: 1460068

Ending Ticket: 1460248

Missing HaulTickets after 1460168

	Start Station	End Station	=	
Mainline (1)	42000.00	42375.00	=	3,234.50 Ton
Mainline (2)	0.00	0.00	=	288.90 Ton

Remarks: no missing tickets - change in ticket books

Change Order	Unit Price	Haul Sheet Quantity	Pay Quantity	
	7.20	4981.08	245.43	
Total:		4,981.08	245.43	Running Total: 5,226.51

North Dakota Department of Transportation
Statement of Force Account Personnel Cost

Project Number: STI-IM-1-094(014)156
Subproject 1: GRADE, SURF, LIGHTING & INCIDENTALS
 CODE J000
Contractor: NORTHERN IMPROVEMENT CO
Subcontractor:
Force Account: 2 Description: Pave Guardrail Embankments

PCN: 51
Date: 1/3/03

Date	Employee Name	Work Class.	Group Number	Hours Worked	Wage Rate	Wage Amount	H/W Rate	Benefit Total	
12/17/2002	Mister Rogers	Operator	4	4.00	16.50	66.00	5.50	22.00	
		OT		2.00		49.50			
12/15/2002	John Smith	Laborer	4	8.00	12.00	96.00	0.00	0.00	
		OT		0.00		0.00			
12/14/2002	John Smith	Laborer	4	8.00	12.00	96.00	0.00	0.00	
		OT		2.00		36.00			
Totals							343.50		22.00

**North Dakota Department of Transportation
Statement of Force Account Equipment Costs**

Project Number: STI-IM-1-094(014)156
Subproject 1 : GRADE, SURF, LIGHTING & INCIDENTALS
 CODE J000
Contractor: NORTHERN IMPROVEMENT CO
Force Account: 2 Description: Pave Guardrail Embankments
PCN: 51
Date: 1/3/03

Date	Equipment	Unit Number	Capacity	Bare Rate	Service Charge	Rental Rate	Standby Rate	Work Hours	Standby Hours	ork Amount	Standby Amount
12/17/2002	Komatsu backhoe	44		40.00	5.00	45.00	20.00	4.00		180.00	
12/14/2002	John Deere 425 Front End Loader	45-102	1 CY	15.00	5.00	20.00	7.50	8.00		160.00	
12/14/2002	Caterpillar 625 Scraper	45-442	12 CY25	.00	5.00	30.00	12.50	8.00		240.00	
Totals										580.00	0.00

North Dakota Department of Transportation
Statement of Force Account Material Cost

Project Number: STI-IM-1-094(014)156
1956e 11 GRADE, SURF. LIGHTING & INCIDENTALS
CODE J000
Contractor: NORTHERN IMPROVEMENT CO
Subcontractor: , ag6T166aGMA2 o T46gJ 4aMAP ave Guardrail Embankments
) P 51
ofe TA 1/3/03

o fe T	F r a g f	LMa(6T	Quantity	NMe	NM(e)g(6T	U- a GMe	9f &
12/17/2002	HBP	93089	35.00	ton	35.00	1,225.00	73.50
12/16/2002	HBP	93089	25.00	ton	35.00	875.00	52.50
12/15/2002	boards	44032	2.00	each	2.00	4.00	0.24
12/14/2002	HBP	93012	50.00	ton	35.00	1,750.00	105.00
12/14/2002	boards	44032	4.00	each	2.00	8.00	0.48
12/14/2002	oil	44503	5.00	ton	153.00	765.00	45.90
					9a d.4	/3VCO22	COOVC

**North Dakota Department of Transportation
Summary Statement of Force Account**

Project Number: STI-IM-1-094(014)156

PCN: 51

Date: 01/03/2003

Subproject 1 : GRADE, SURF. LIGHTING & INCIDENTALS
CODE J000

Contractor: NORTHERN IMPROVEMENT CO

Subcontractor:

Force Account: 2 : Pave Guardrail Embankments

SUMMARY OF COSTS

	LABOR		MATERIALS		EQUIPMENT
	Wages	H & W	Material	Sales Tax	Equipment
Totals	258.00	85.50	4,627.00	277.62	580.00

Labor (Contractor Direct Cost)					343.50
70.00 % of Labor (SPEC 109.04A)					240.45
Total labor Costs					583.95
Materials Costs (Excluding Tax)					4,627.00
15.00 % of Materials Costs					694.05
Sales Tax					277.62
Total Materials Costs					5,598.67
Equipment Cost					580.00
Total Force Account This Summary					6,762.62
Prime Contractors Percentage					0.00
Grand Total Force Account This Summary					6,762.62

Field Engineer

Date

For Contractor

Date

Construction Engineer

Date

North Dakota Department of Transportation
Intermediate Progressive Estimate Number 1

Project: H-3-019(003)121
 Type: **Contractor**
 Contract Date: **HARDRIVES INC**
 PO BOX 279
 SAINT CLOUD
 MN 563020279

PCN: 14452
 Covering Period From 04/08/2001 to 12/19/2002
 Length: 12.88
 Contract Cost \$ 464,315.80
 Change Orders Estimated: \$ 89,500.00
 County: Benson

Vendor Number: 1234
 Funding Doc No: S3019003 475

Funding Sources	STATE	MTCE	FI	Totals
Total Work Done to Date	0.00			452,000.45
Retainage @ 2.00 % To Date	0.00			9,286.32
Previous Retainage	0.00			0.00
Retainage this Period	0.00			9,286.32
Liquidated Damages				
2 Days to Date	0.00			200.00
0 Days to Previous	0.00			0.00
2 Days this Period	0.00			200.00
Total Due to Date	0.00			442,514.13
Previous Payments	0.00			0.00
Payment Due this Estimate	0.00			442,514.13

Funding Sources	NP STATE	MTCE
Total Work Done to Date	452,000.45	
Retainage @ 2.00 % To Date	9,286.32	
Previous Retainage	0.00	
Retainage this Period	9,286.32	
Liquidated Damages		
2 Days to Date	200.00	
0 Days to Previous	0.00	
2 Days this Period	200.00	
Total Due to Date	442,514.13	
Previous Payments	0.00	
Payment Due this Estimate	442,514.13	

Engineer: Ken Jewett
 District Engineer Brad Darr

North Dakota Department of Transportation
Progressive Estimate Details

1/9/03

Project: H-3-019(003)121
 SubProject: 1 THIN LIFT OVERLAY

PCN: 14452 Date Submitted For Payment: 12/19/2002

Letting Date: 11/15/2002

Spec. No.	Code	C.O.	No.	Description	Original Quantity	Unit	Price	Unit Price	BID Amount	QUANTITIES		Total Amount To Date	Projected Quantity
										Current	Total to Date		
Bid Items and Change Orders													
103	100	N		CONTRACT BOND	1.000	LSUM	2,080.000		2,080.00	0.558	1,160.64	55.80%	
408	176	N		HOT BITUMINOUS PAVEMENT CL 27	21,007.000	TON	10.350		217,422.45	21,318.540	220,646.89	101.48%	
408	176	2N		HOT BITUMINOUS PAVEMENT CL 27	2,000.000	TON	12.500		25,000.00	570.000	7,125.00	28.50%	
408	445	N		PG 58-28 ASPHALT CEMENT	1,218.000	TON	163.250		198,838.50	1,349.398	220,289.22	110.79%	
550	1	1		This description is what you see on your	1,000.000	SY	33.000		33,000.00				
550	128	3N		11IN NON-REINF CONCRETE PAVEMEN	1,000.000	SY	30.000		30,000.00				
622	61	1N		Steel Piling HP 14X73	500.000	LF	1.000		500.00	128.700	128.70	25.74%	
622	1210	4N		Diane test pile	50.000	LF	20.000		1,000.00	75.000	1,500.00	150.00%	
702	100	N		MOBILIZATION	1.000	LSUM	26,550.000		26,550.00				
704	100	N		FLAGGING	150.000	MHR	17.000		2,550.00				
704	1000	N		TRAFFIC CONTROL SIGNS	730.000	UNIT	2.800		2,044.00				
704	1052	N		TYPE III BARRICADE	2.000	EA	75.000		150.00				
704	1185	N		PILOT CAR	75.000	HR	27.500		2,062.50	2.000	150.00	100.00%	
706	300	N		FIELD LABORATORY-TYPE C	1.000	EA	2,000.000		2,000.00				
762	128	N		PLASTIC PVMT MK FILM-MESSAGE	61.000	SF	12.000		732.00				
762	405	N		SHORT TERM 4IN BROKEN LINE-PNT T/	16,991.000	LF	0.095		1,614.15				
762	410	N		SHORT TERM 4IN LINE NPZ-PN TP OR F	21,123.000	LF	0.095		2,006.69				
762	1104	N		PVMT MK PAINTED 4IN LINE	174,042.000	LF	0.036		6,265.51				
Stockpiled and Invoiced Items									\$464,315.80			\$442,246.75	
704	1052	N		TYPE III BARRICADE	2.000	EA	0.500		1.00			\$8,753.70	
Contract Adjustments									\$89,500.00				
408	120	N		Diane price adjustment for bad bit	1,000.000	EA	1.000		1,000.00	1,000.000	1,000.00	100.00%	
Total Contract Adjustments									\$1,000.00				
Total:									\$554,816.80				\$452,000.45
Total Project Bid Amounts									\$464,315.80				\$442,246.75
Total Project Change Orders									\$89,500.00				\$8,753.70
Total Project Stockpiled and Invoiced Items									\$1.00				\$1,000.00
Total Project Contract Adjustments									\$1,000.00				\$1,000.00
Total Project:									\$554,816.80				\$452,000.45

North Dakota Department of Transportation
Quantity Book

PCN: 14452

01/09/2003

Project: H-3-019(003)121

Sub: 1 - THIN LIFT OVERLAY

103 100 CONTRACT BOND

1,000 L SUM at \$ 2,080,000 Per L SUM

Date	Chg	Order Location	Total	Run Total	Documentation	Remarks
06/20/2001 *			0.558	0.558	PQ - Pay Quantity Report	contract bond bid
12/19/2002		Dianes	0.442	1.000	PQ - Pay Quantity Report	Diane pay for remaining contract bond

North Dakota Department of Transportation
Quantity Book

Project: H-3-019(003)121
Sub: 1 - THIN LIFT OVERLAY

PCN: 14452

408 176 HOT BITUMINOUS PAVEMENT CL 27

21,007.000 TON at \$ 10.350 Per TON

Date	Chg	Order Location	Total	Run Total	Documentation	Remarks
06/15/2001	*		3,501.660	3,501.660	PQ - Pay Quantity Report	total on last ticket matches
06/16/2001	*		2,861.180	6,362.840	PQ - Pay Quantity Report	total tons for last ticket
06/19/2001	*		3,942.850	10,305.690	PQ - Pay Quantity Report	total from last ticket
06/20/2001	*		1,514.430	11,820.120	PQ - Pay Quantity Report	total tons form last ticket
06/21/2001	*		2,996.150	14,816.270	PQ - Pay Quantity Report	total tons
06/22/2001	*		4,191.370	19,007.640	PQ - Pay Quantity Report	total from last
06/23/2001	*		2,310.900	21,318.540	PQ - Pay Quantity Report	test

01/09/2003

North Dakota Department of Transportation
Quantity Book

Page 3 of 20

Project: H-3-019(003)121
Sub: 1 - THIN LIFT OVERLAY

PCN: 14452

408 176 HOT BITUMINOUS PAVEMENT CL 27

Change Order: 2 2,000,000 TON at \$ 12.500 Per TON

Date	Chg Order Location	Total	Run Total	Documentation	Remarks
12/18/2002	* 2 400.7	400.000	400.000	PQ - Pay Quantity Report	Increase quantity
12/18/2002	* 2 Mainline (1)	20.000	420.000	Haul Sheet #1	Missing ticket are void
12/18/2002	* 2 Approaches	51.000	471.000	Haul Sheet #1	Missing ticket are void
12/19/2002	* 2 Mainline (1)	99.000	570.000	Haul Sheet #2	Diane's pit

North Dakota Department of Transportation
Quantity Book

Project: H-3-019(003)121
Sub: 1 - THIN LIFT OVERLAY

PCN: 14452

408 445 PG 58-28 ASPHALT CEMENT

1,218,000 TON at \$ 163.250 Per TON

Date	Chg	Order Location	Total	Run Total	Documentation	Remarks
06/15/2001	*		226.042	226.042	Cutoff Report #1	This is test for training and I need help
06/15/2001	*		179.136	405.178	Cutoff Report #2	Nancy this is for you. HHHHHH
06/19/2001	*		243.740	648.918	PQ - Pay Quantity Report	HI nancy how are you. I am fine
06/20/2001	*		96.440	745.358	PQ - Pay Quantity Report	HI again
06/21/2001	*		192.760	938.118	PQ - Pay Quantity Report	hhhh
06/22/2001	*		261.130	1,199.248	PQ - Pay Quantity Report	lll
06/23/2001	*		150.150	1,349.398	PQ - Pay Quantity Report	mmm

North Dakota Department of Transportation
Quantity Book

PCN: 14452

01/09/2003
Project: H-3-019(003)121
Sub: 1 - THIN LIFT OVERLAY

550 128 11IN NON-REINF CONCRETE PAVEMENT Change Order: 3 1,000,000 SY at \$ 30,000 Per SY

Date	Chg	Order Location	Total	Run Total	Documentation	Remarks
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01/09/2003

North Dakota Department of Transportation
Quantity Book

Project: H-3-019(003)121
Sub: 1 - THIN LIFT OVERLAY

PCN: 14452

622 61 Steel Piling HP 14X73

Change Order: 1 500,000 LF at \$ 1,000 Per LF

Chg

Date Order Location

06/27/2001 * 1 Pier/Abut - 5 Pile - 1

Total

128.700

Run Total Documentation

128.700 Log of Pile Driving

Remarks

diane

Project: TEU-SU-1-981(033)041

SubProject: 1 - GRADING, SURF., SIG., LIGHT. & INCIDENTALS CODE JO

Explanation of Change in Plan List <<

Subproject: 1 GRADING, SURF., SIG., LIGHT. & INCIDENTALS CODE JOOO

Spec Code Description

302 100 SALVAGED BASE COURSE

Inc/Dec Amt : 15,560.272 Qty : 2,992.360 Deviation %: 210.14

Enter explanation here.

302 120 AGGREGATE BASE COURSE CL 5

Inc/Dec Amt : -23,816.730 Qty : -2,268.260 Deviation %: -25.52

408 185 HOT BITUMINOUS PAVEMENT CL 29

Inc/Dec Amt : 22,094.905 Qty : 797.650 Deviation %: 178.85

408 320 120-150 ASPHALT CEMENT

Inc/Dec Amt : 5,880.644 Qty : 46.970 Deviation %: 173.96

550 112 8IN NON-REINF CONCRETE PAVEMENT CL AE

Inc/Dec Amt : -7,925.148 Qty : -314.490 Deviation %: -7.86

Change Orders

Change Order No : 1 Explanation on Change Order : N

Spec Code Description

Participating

709 102 geotextile fabric

Y

Change Order No : 2 Explanation on Change Order : N

Spec Code Description

Participating

550 2040 PORTLAND CEMENT

Y

750 200 CONCRETE MEDIAN PAVING

Y

Change Order No : 3 Explanation on Change Order : N

Spec Code	Description	Participating
708 2280	SEEDING-TYPE B-CL V	Y
708 2281	SEEDING-TYPE B-CL V	Y

Change Order No : 4 Explanation on Change Order : N

Spec Code	Description	Participating
750 100	SIDEWALK CONCRETE	Y

Change Order No : 5 Explanation on Change Order : N

Spec Code	Description	Participating
900 3	Readajust sprinkler heads	N

7/28/03

**North Dakota Department of Transportation
Contract Time for Completion**

Page 1 of 1

Project H-3-019(010)121

Contractor HARDRIVES INC

Original Contract Cost \$464,315.80

Contract Increase -\$309,950.16

% of Increase 0.00%

Contract Comp. Date October 6, 2003

Time Charges Start April 8, 2003

Actual Comp. Date July 28, 2003

Working Day Contract	Completion Date Contract	(With Guaranteed Working Days)
Working days allowed _____	Cal. days from start to comp. date <u>182</u>	Guaranteed working days _____
Extra days due to increase _____	Extra days due to increase <u>0</u>	Working days charged _____
Extra time for change orders _____	Extra time for change orders <u>0</u>	Working days due _____
Total time for completion _____	Total time for completion <u>182</u>	Revised comp. date _____
Working days charged _____	Calendar days expired <u>112</u>	

Total days excess 0.0 Liquidated damages per day \$ 200.00 Total liquidated damages \$ 0.00

Date	Working Days	Reason for Time Lost
4/8/03	1.0	
4/9/03	1.0	
4/10/03	1.0	
4/11/03	1.0	
4/12/03	1.0	saturday
4/13/03	0.0	
4/14/03	0.0	
4/16/03	1.0	
4/17/03	1.0	
4/18/03	1.0	
4/19/03	1.0	
4/20/03	1.0	
4/21/03	1.0	
4/22/03	1.0	

Totals: 12.0



North Dakota Department of Transportation

608 East Boulevard Avenue • Bismarck, ND 58505-0700

Information: (701) 328-2500

FAX Mail: (701) 328-4545

TTY: (701) 328-4156

(Date)

Mr. Joe Contractor
Dry River Contracting
1004 Hill Avenue
Anytown, ND 58000

PROJECT HEU-1-999(000)555, GRADING, WHATEVER COUNTY

You are hereby notified that the above project was completed on (DATE). The project was inspected and accepted by (OWNER'S NAME) on (DATE).

This acceptance does not, however, waive the Owner's legal rights outlined in Section 105.14 of the NDDOT Standard Specifications.

JOHN ENGINEER, PROJECT ENGINEER (MANAGER)

c: NDDOT/District
(Owner)



North Dakota Department of Transportation

608 East Boulevard Avenue • Bismarck, ND 58505-0700

Information: (701) 328-2500

FAX Mail: (701) 328-4545

TTY: (701) 328-4156

(Date)

Federal Highway Administration
PO Box 1755
Bismarck ND 58502-1755

SUBJ: PROJECT HEU-1-999(000)555
 COUNTY WHATEVER COUNTY
 TYPE OF WORK GRADING
 CONTRACTOR DRY RIVER CONTRACTING

This is to certify that:

The Contractor was notified by the Project Engineer on (DATE) that this project was completed on (DATE). On (DATE), the NDDOT reviewed the project with (Owner's Representative and Project Engineer). The Owner has reserved their legal rights outlined in Section 105.14 of 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 job for Federal Aid.

JOHN ENGINEER, DISTRICT ENGINEER, WHATEVER DISTRICT

att: Engr's Acceptance Ltr.
c: NDDOT Construction Div.
 NDDOT Materials Div.
 Political Subdivision
 Project Engineer
 District Mtrls. Coord.

Construction Automated Records System

Project: AC-HPP-SS-TES-1-804(023)072

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SubProject: 1 - GRADING, SALVAGED BASE COURSE, HOT BITUMINOUS PAVE

Final Checklist Maintenance <<

Contractor: NORTHERN IMPROVEMENT CO FAR

Owner:

Original Contract Amount: 6,828,847.60

Final Contract Amount: 0.00

Start Date: 04/17/2007

Completion Date:

% of Final Completed to Date:

Tentative Date of Final Submission:

Remarks:

Item to be Submitted	Local Agency/ Dist.	Const. Services	Not Req.
Final Estimate Certified by Project Engineer	<input type="checkbox"/>	<input type="checkbox"/>	
Final Acceptance Letter to Contractor from Project Engineer	<input type="checkbox"/>	<input type="checkbox"/>	
Project Eng. Report on Materials Acceptance (SFN 10110)	<input type="checkbox"/>	<input type="checkbox"/>	
Contract Time for Completion (SFN 5660)	<input type="checkbox"/>	<input type="checkbox"/>	
Materials File	<input type="checkbox"/>	<input type="checkbox"/>	
Quantity Book	<input type="checkbox"/>	<input type="checkbox"/>	
Pay Quantity Reports	<input type="checkbox"/>	<input type="checkbox"/>	
Correspondence File	<input type="checkbox"/>	<input type="checkbox"/>	
Project Diaries	<input type="checkbox"/>	<input type="checkbox"/>	
All Field Books	<input type="checkbox"/>	<input type="checkbox"/>	
Certified Payrolls	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Narrative Report (Not Required on County Jobs,NDDOT Seal Coats, Contr Patch, TLO's	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Statement of Materials Taken from Pits (SFN 10061)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Completed Materials Database Inventory Record SFN 53959	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Copy of Certified letter to Contractor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Haul Sheet File	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Summary of Aggregate Quality Tests (SFN 10072)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Explanation of Change in Plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fuel Cost Adjustment Worksheet (SFN 58543)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DBE/SBE Participation Certification (SFN 14268a/b)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Haul Road Release (SFN 14458)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pit Release and Receipt (SFN 14486)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
T.E.R.O. Proof of Payment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
As Built Plans - County or Completed by District	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Combined Materials and Project Acceptance Letter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
404 Permit Certification by District Engineer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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User:Nancy Horner PCN:945