SECTION 5
CONTRACT CHANGES/PROGRESSIVE ESTIMATES

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 by the type of work being done. The <u>Change Order Approval Process</u> chart shows the required approval authority for various types of change orders and monetary amounts. Parts A though F are described as follows:

Part A

The **project engineer** has final change order approval authority for the change orders listed in Part A 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 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** or the **Deputy Director for Engineering** has final change order approval authority for all change orders that exceed the District

Engineer's approval authority. Verbal or written approval must be obtained prior to performing the work.

The Director of Operations shall inform the Deputy Director for Engineering on the following types of change orders:

1. Net change order increase or decrease exceeding $100,000
2. Changes affecting the 'Environmental Commitments' or that cause impacts where environmental action needs to be reassessed
3. Major changes in project limits that would modify project scope or required adjustment of the project agreement between the NDDOT and the FHWA

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

1. The net cost increase or decrease is greater than $100,000
2. The project is on the National Highway System
3. The original contract amount is more than $3,000,000

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 DOT approval at the Office of Operations level as shown in the approval chart. Prior FHWA approval of the change order is required if:

1. The net increase or decrease is greater than $100,000
2. The project is on the National Highway System
3. The original contract amount is more than $3,000,000

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 'Major Changes in Project Limits' of the approval process chart require NDDOT and 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.

Part F
Changes to ER (Emergency Relief) funded project that affect ER participation or eligibility of added work must have prior FHWA concurrence. Normal overruns and underruns in addition to routine change orders on ER projects should be processed in according to the procedures defined in the 'Change Order Approval Process' chart.

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 DOT 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 DOT 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)

		HIGHEST APPROVAL AUTHORITY AND TYPE OF APPROVAL REQUIRED			
		PROJECT ENGINEER	**NDDOT DISTRICT ENGINEER**	**NDDOT OFFICE OF OPERATIONS**	**FEDERAL HIGHWAY ADMINISTRATION**
REASONS FOR CHANGE ORDER	CHANGE ORDER MONETARY AMOUNT (INCREASE OR DECREASE)	Can approve time extensions up to 5 working days*	Can approve time extensions up to 15 working days*	Approves all time extensions exceeding 15 working days*	Responsible for projects only on the NATIONAL HIGHWAY SYSTEM and costing more than $3 million. Any Change Order that affects the Environmental document deviating from the environmental commitments or that actually impacts the environment where the environmental action would have to be change will require FHWA approval on all projects regardless of the Highway System or monetary amount of the Change Order. (Reference Line “D”)
A. Design changes or changed conditions that require adding or deleting Contract Items or that increase the cost of the Original Contract Bid Items Examples are: (1) Minor extension of project’s limits beyond plan limits (2) Change in width or thickness of surfacing course	≤ $10,000 >>>>>	**WRITTEN** formal Change Order Approval			
(3) Change in geometrics such as alignment, grade, widths, etc. (4) Change in size of drainage structure (5) Change in natural drainage patterns	> $10,000 ≤ $50,000 >>>>>	>>>>>	**VERBAL** Prior to performing the work, followed by **WRITTEN** formal Change Order approval		**NOTE: FHWA and the Construction Services Division are available to give technical Advice on any Change Order.**
(6) Other less common conditions which may necessitate a design change order will be determined on a project-by-project basis (7) Unforeseen subsurface soils, water, or utilities conditions (8) Quantity overruns or underruns of Major Contract Bid Items that result in a 25 percent deviation in the original contract quantity	> $50,000 ≤ $100,000 >>>>>	>>>>>	>>>>>	**VERBAL** Prior to performing the work, followed by **WRITTEN** formal Change Order approval	
*If the time extension for change order work or other reasons is requested in calendar days, it shall be converted to working days using the following formula: Calendar Days Requested/1.4 = Working Days Requested	> $100,000 >>>>>	>>>>>	>>>>>	Approval by Director of Office of Operations or Deputy Director for Engineering	**VERBAL** Prior to performing the work, followed by **WRITTEN** formal Change Order approval
B. Structural Design Changes C. Changes in specifications, including materials specifications		>>>>>	>>>>>	**WRITTEN** formal Change Order Approval	**WRITTEN** formal Change Order Approval if CO >$100,000 and project on National Highway System
D. Changes that affect the “Environmental Commitments” or that impact the environment to where the environmental action needs to be reassessed. E. Major changes in project limits; those that would modify the scope of the project or requires adjustment of NDDOT project agreement with FHWA		>>>>>	>>>>>	>>>>>	**WRITTEN** formal Change Order Approval NOTE: Applies to all Federal Aid Projects
F. Emergency Relief (ER) Projects-Changes to ER-funded projects that affect ER Participation or eligibility of added work must have prior to FHWA concurrence		>>>>>	>>>>>	>>>>>	**WRITTEN** formal Change Order Approval NOTE: Applies to all Federal Aid Projects

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 if known. If you know the spec number but are not sure what the code is, type in the spec number and click on the Search button. A list of all pay items associated with the spec number will be generated. Find the item for the contract adjustment and click on the link. The code will be filled in.
   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.

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.

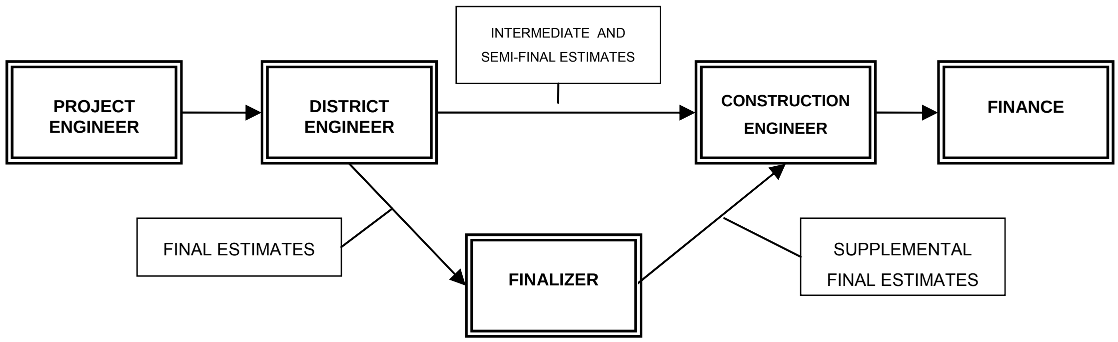
Not all estimates will be approved by the Construction Engineer. Projects that are paid with Maintenance funds will be approved by the Maintenance Engineer. District funded projects will be approved by the District Engineer. The Claim for Payment will be signed by the individual having approval authority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

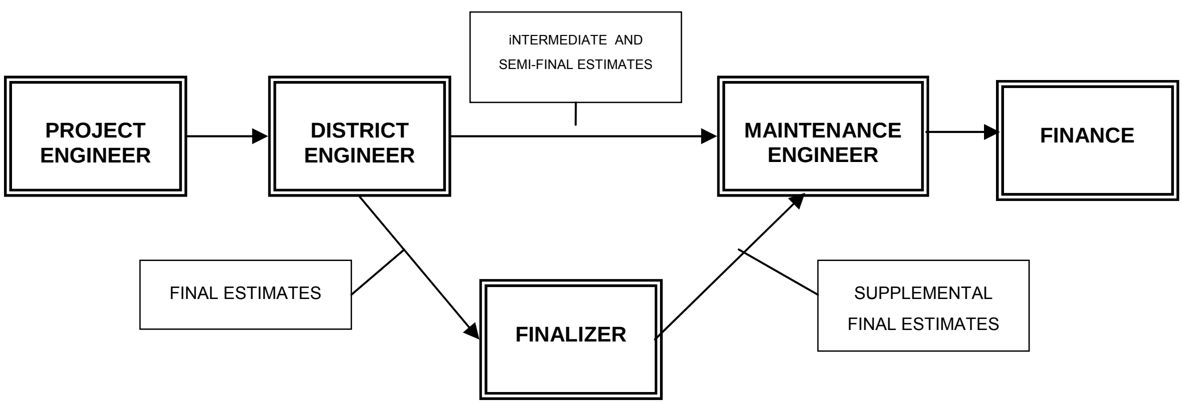
It is no longer necessary to generate estimates at the end of the fiscal year or those with a June 30th cut off date on projects that have used CARS to generate pay estimates. CARS will automatically sort the pay items by date and the amounts for each fiscal year will be indicated in the information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

ESTIMATED APPROVAL FLOW CHARTS

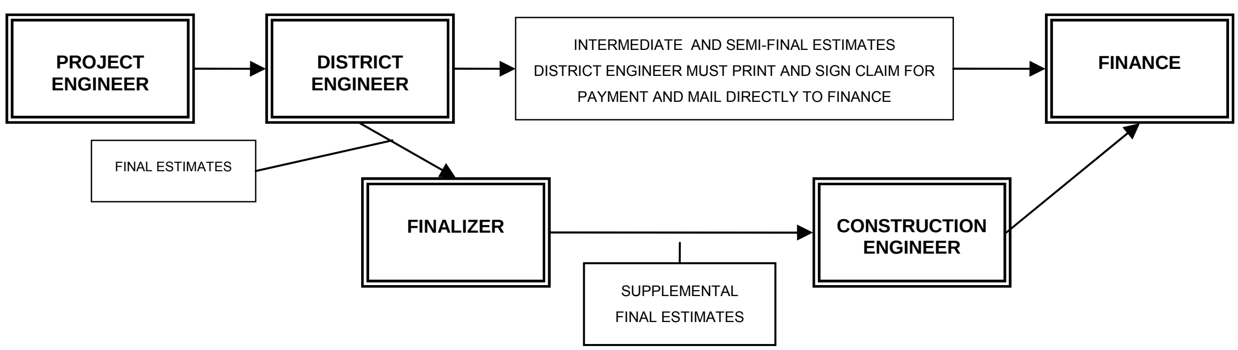
CONSTRUCTION PROGRESSIVE ESTIMATE FLOW



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/divisions/construction/fuelcostadjustments.htm

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.