



PREPARATION OF FORCE ACCOUNTS WORKSHOP

District 6 Resource Center

March 31, 2011

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PREPARATION OF FORCE ACCOUNTS WORKSHOP

- An authorization is required to get paid for this type of work
- Review the force account process
 - Construction Memorandum 08-09 *Force Account Billing*
http://www.dot.state.il.us/const/curpdf/memorandum_09.pdf
 - Article 109.04(b) of the Standard Specifications, *Measurement and Payment/Force Account Basis* <http://www.dot.state.il.us/desenv/spec2007/div100.pdf>
 - Force Account Time and Materials
 - Labor
 - Labor Additives
 - Materials
 - Equipment
 - Statement of Cost (Invoice)
- Review the documentation required in the force account process
 - Forms for force account process are located on the IDOT webpage at:
<http://www.dot.state.il.us/const/conforms.html>
 - Form BC 635, *Extra Work Daily Report*
 - Form BC 2370, *Equipment Expense Rate Data*
 - *Force Account Invoice Format per Construction Memo 08-09*

Article 109.04(b) of the Standard Specifications, *Measurement and Payment/Force Account Basis*

109.04 Payment for Extra Work. Extra work which results from any of the changes as specified in Article 104.02 shall not be started until authorization from the Engineer is received, which authorization shall state the items of work to be performed and the method of payment for each item. Work performed without such order will not be paid for.

Extra work will be paid for at either the contract price, a lump sum price or agreed unit prices, or on a force account basis.

(a) **Lump Sum Price or Agreed Unit Prices.** When extra work is to be paid for a either a lump sum price or agreed unit prices, the lump sum or unit price shall be agreed upon by the Contractor and the Engineer.

(b) **Force Account Basis.** When extra work is to be paid for by force account, the basis for the force account shall be as follows.

(1) **Labor.** For all labor and foremen in direct charge of the specific operations, the Contractor shall receive the actual normal rate of wage paid for each and every hour that said labor and foremen are actually engaged in such work.

The Contractor shall receive the actual costs paid to, or in behalf of, workers by reason of subsistence and travel allowances, health and welfare benefits, pension fund benefits or other benefits, when such amounts are required by collective bargaining agreement or other employment contract generally applicable to the classes of labor employed on the work.

An amount equal to 35 percent of the sum of the above items will also be paid the Contractor.

(2) **Bond, Insurance, and Tax.** For property damage, liability, and workmen's compensation insurance premiums, unemployment insurance contributions, and social security taxes on the force account work, the Contractor shall receive the actual cost, to which ten percent will be added. The Contractor shall furnish satisfactory evidence of the rate or rates paid for such bond, insurance, and tax.

(3) **Materials.** For materials accepted by the Engineer and used, the Contractor shall receive the actual cost of such materials delivered on the work, including transportation charges paid by the Contractor (exclusive of machinery rentals as hereinafter set forth), to which cost 15 percent will be added.

(4) **Equipment.** For any machinery or special equipment (other than small tools) the use of which has been authorized by the Engineer, the Contractor will be paid according to the latest revision of "SCHEDULE OF AVERAGE ANNUAL EQUIPMENT OWNERSHIP EXPENSE" as issued by the Department. The equipment should be of a type and size reasonably required to complete the extra work.

(5) **Miscellaneous.** No additional allowance will be made for general superintendence, the use of small tools, or other costs for which no specific allowance is herein provided.

(6) **Statements.** No payment will be made for work performed on a force account basis until the Contractor has furnished the Engineer with itemized statements of the cost of such force account work. Statements shall be accompanied and supported by invoices for all materials used and transportation charges. However, if materials used on the force account work are not specifically purchased for such work but are taken from the Contractor's stock, then in lieu of the invoices, the Contractor shall furnish an affidavit certifying that such materials were taken from his/her stock, that the quantity claimed was actually used, and that the

price and transportation claimed represent the actual cost to the Contractor.

Itemized statements at the cost of force account work shall be detailed as follows.

a. Name, classification, date, daily hours, total hours, rate, and extension for each laborer and foreman. Payrolls shall be submitted to substantiate actual wages paid if so requested by the Engineer.

b. Designation, dates, daily hours, total hours, rental rate, and extension for each unit of machinery and equipment.

c. Quantities of materials, prices and extensions.

d. Transportation of materials.

e. Cost of property damage, liability and workmen's compensation insurance premiums, unemployment insurance contributions, and social security tax.

(7) **Work Performed by an Approved Subcontractor.** When extra work is performed by an approved subcontractor, the Contractor shall receive, as administrative costs, an amount equal to five percent of the total approved costs of such work with the minimum payment being \$100.

(8) All statements of the cost of force account work shall be furnished to the Engineer not later than 60 days after receipt of the Central Bureau of Construction form "Extra Work Daily Report". If the statement is not received within the specified time frame, all demands for payment for the extra work are waived and the Department is released from any and all such demands. It is the responsibility of the Contractor to ensure that all statements are received within the specified time regardless of the manner or method of delivery.

Article 109.04(b) of the Standard Specifications,
Measurement and Payment/Force Account Basis

Labor

- Contractor will be reimbursed actual cost of labor including travel, subsistence, health and welfare, pension, etc.
- Plus **35%**

Article 109.04(b) of the Standard Specifications,
Measurement and Payment/Force Account Basis

Labor (continued...)

- Labor Additives

- Contractor will be reimbursed actual cost of property damage, liability and worker's compensation insurance premiums; unemployment insurance premiums; and social security taxes.

- Plus **10%**

Article 109.04(b) of the Standard Specifications,
Measurement and Payment/Force Account Basis

Materials

- Contractor will be reimbursed actual cost of materials delivered, used, and accepted by the Engineer including transportation costs.
- Plus **15%**

Article 109.04(b) of the Standard Specifications,
Measurement and Payment/Force Account Basis

Materials Incorporated into Project

- Items purchased must be supported with invoices including transportation charges
- Paid receipts are required.
- Items taken from Contractor stock must be accompanied by an affidavit certifying:
 - materials were taken from stock
 - quantity claimed was used on the project
 - price and transportation charges represent the actual cost

Article 109.04(b) of the Standard Specifications,
Measurement and Payment/Force Account Basis

Equipment

Contractor will be reimbursed actual cost of equipment used (other than small tools with a replacement value < \$1,000)

- Equipment owned by Contractor
- Rented Equipment

Article 109.04(b) of the Standard Specifications, *Measurement and Payment/Force Account Basis*

Equipment (continued...)

Owned Equipment

- *Equipment Watch Rental Rate Blue Book* will be used to determine equipment rates for force account billing.
 - Prime Contractors will subscribe to the Blue Book and acquire rental rates for contractor owned equipment used on force accounts
 - DBE Subcontractors can fill out form BC-2370 and Supportive Services or the District office will provide rates
 - Items not available from Blue Book including rates for traffic control items, lifting clamps and trench boxes are shown in Attachment 1 of Construction Memo 08-09
http://www.dot.state.il.us/const/curpdf/memorandum_09.pdf

Rented Equipment

- Actual rental & transportation costs plus **5%**
- Rental rates shall not exceed those of established distributors
- Rental rates may not exceed contractor's ownership rate without prior written approval before the work is started.

Article 109.04(b) of the Standard Specifications,
Measurement and Payment/Force Account Basis

Work Performed by Approved Subcontractors

- Contractor will be reimbursed actual cost of work performed in accordance with the aforementioned requirements.
- Plus 5% (or at least \$100 if the work <\$2000)

Article 109.04(b) of the Standard Specifications,
Measurement and Payment/Force Account Basis

Statement of Cost (Invoice)

- Statement shall include:
 - For laborers and foremen
 - Name
 - Classification
 - Date
 - Daily hours
 - Total hours
 - Rate and extension
 - Misc
 - Cost of insurance premiums, and payroll taxes and contributions
 - Equipment
 - Designation
 - Dates
 - Daily hours
 - Total hours
 - Rate and extension
 - Materials
 - Quantities
 - Prices and extensions
 - Transportation costs

Article 109.04(b) of the Standard Specifications,
Measurement and Payment/Force Account Basis

Statement of Cost (continued...)

- Statements must be received by the Engineer no later than 60 days after the Engineer has received the *Extra Daily Work Report* or demands for payment for the extra work are waived.
- In other words, payment is denied.

Construction Memorandum 08-09

Force Account Billing

- Provides examples of forms required
- Defines labor fringe costs and payroll taxes
- Memorandum explains how to use the *Equipment Watch Rental Rate Blue Book*
- Defines how to calculate equipment rates using the *Blue Book*
 - Rental rates may not exceed those allowable for equipment owned by the Contractor unless first approved in writing.
 - Lists construction equipment not included in the *Blue Book*
- Defines other miscellaneous issues affecting force accounts

Documentation Required in the Force Account Process

Form BC 635, *Extra Work Daily Report (Example 1)*

ATTACHMENT 2



Extra Work Daily Report

EXAMPLE

County
Section
Route
District

Contractor Smith Construction Co. Contract No.
Report No. 1 Date mm/dd/yyyy Job No.
Authorization No. _____ Project No.

Description and Location of Work: Additional Pipe & Collars at Station 00+30

LABOR	
Name, Worker Classification	Total Hours Worked (Straight-Time) (Overtime)
Matt Reilly, Foreman	6
Tim Seitz, Laborer	6
Bemie Henderson, Laborer	6
Earl Roth, Laborer	6
John Graham, Laborer	6
Sarah Reid, Teamster	6
Jeanmarie Smith, Operator	6

EQUIPMENT USED		MATERIAL USED	
Description: List Manufacturer, Model, Year Built, Capacity	Number of Hours	Description	Quantity
2006 Caterpillar 814 F Wheel Dozer (240HP)	6		
2006 Chevy Light Duty PU Truck, 4x4 Crew Cab 1/2 ton	6	24 in RCP	64 ft
2004 On-Hwy Rear Dump Trk 4x4 Diesel 30,000lb/GVW	6		

REMARKS: _____

APPROVED: A.S. Smith Contractor's Representative APPROVED: Stephanie Jones State's Representative

Original: Contractor
cc: District File

Documentation Required in the Force Account Process

Form BC 635, *Extra Work Daily Report (Example 2)*



Extra Work Daily Report

County
Section
Route
District

Contractor Smith Construction Co. Contract No.
Report No. 2 Date mm/dd/yyyy Job No.
Authorization No. _____ Project No.
Description and Location of Work: Additional Pipe & Collars at Station 00+30

EXAMPLE

LABOR	
Name, Worker Classification	Total Hours Worked (Straight-Time) (Overtime)
Matt Reilly, Foreman	8
Tim Seitz, Laborer	8
Bemie Henderson, Laborer	8
Earl Roth, Laborer	8
John Graham, Laborer	8
Sarah Reid, Teamster	8
Jeanmarie Smith, Operator	8

EQUIPMENT USED		MATERIAL USED	
Description: List Manufacturer, Model, Year Built, Capacity	Number of Hours	Description	Quantity
2006 Caterpillar 814 F Wheel Dozer (240HP)	6		
2006 Chevy Light Duty PU Truck, 4x4 Crew Cab 1/2 ton	6	Trench Backfill	48.6 tons
2004 On-Hwy Rear Dump Tr 4x4 Diesel 30,000lb/GVW	6		

REMARKS: _____

APPROVED: A.S. Smith Contractor's Representative APPROVED: Stephanie Jones State's Representative

Original: Contractor
cc: District File

Documentation Required in the Force Account Process

Form BC 635, Extra Work Daily Report (Example 3)



Extra Work Daily Report

EXAMPLE

County _____
 Section _____
 Route _____
 District _____
 Contractor Smith Construction Co. Contract No. _____
 Report No. 3 Date mm/dd/yyyy Job No. _____
 Authorization No. _____ Project No. _____
 Description and Location of Work: Additional Pipe & Collars at Station 00+30

LABOR	
Name, Worker Classification	Total Hours Worked (Straight-Time) (Overtime)
Matt Reilly, Foreman	8 Straight, 2 OT
Tim Seitz, Laborer	8 Straight, 2 OT
Bemie Henderson, Laborer	8 Straight, 2 OT
Earl Roth, Laborer	8 Straight, 2 OT
John Graham, Laborer	8 Straight, 2 OT
Sarah Reid, Teamster	8 Straight, 2 OT
Jeanmarie Smith, Operator	8 Straight, 2 OT

EQUIPMENT USED		MATERIAL USED	
Description: List Manufacturer, Model, Year Built, Capacity	Number of Hours	Description	Quantity
2006 Caterpillar 814 F Wheel Dozer (240HP)	8	Portland Cement	6 sacks
2006 Chevy Light Duty PU Truck, 4x4 Crew Cab 1/2 ton	10	Aggregate	1.5 tons
2004 On-Hwy Rear Dump Trk 4x4 Diesel 30,000lb/GVW	8	Form Lumber, 1in x 6in x 14ft	24pcs

REMARKS: _____

APPROVED: A.S. Smith Contractor's Representative APPROVED: Stephanie Jones State's Representative

Original: Contractor
cc: District File

Documentation
Required in the
Force Account
Process

Form BC
2370,
*Equipment
Expense Rate
Data*



Equipment Expense Rate Data

To Be Filled Out by the Requesting Agency or Contractor:

Contract Number: _____

Name: _____

Address: _____

City: _____ State: _____ Zip Code: _____

Telephone Number: _____

Description of Equipment

Type: _____

Make: _____ Model: _____

Year Manufactured: _____ Fuel Type: _____ Horsepower: _____

Size and/or Capacity: _____

Remarks: _____

Cost of Equipment (For Equipment Not Listed in Blue Book)

Purchase Price: _____ Year Purchased: _____

Estimated or Actual Annual Repair Cost: _____

Estimated or Actual Annual Usage of Equipment in Hours per Year: _____

Additional Comments: _____

(Upon completion, please submit to the appropriate District Office)

Documentation Required in the Force Account Process

Example Blue Book Printout



www.equipmentwatch.com

Rental Rate Blue Book®

March 26, 2011

Caterpillar 416E
Tractor-Loader-Backhoes

Size Class:
14' to Under 15'
Weight:
14,560 lbs.



Configuration for 416E

Power Mode	Diesel	Drive	4WD
Loader Bucket Capacity - Heaped	1.00 cy	Backhoe Stick	Extendable
Net Horsepower	74.0	Operator Protection	ROPS

Equipment Notes: Includes General Purpose loader bucket, backhoe bucket and ROPS, unless otherwise noted.

Blue Book Rates

** FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost.

	Ownership Costs				Estimated Operating Costs Hourly	FHWA Rate** Hourly
	Monthly	Weekly	Daily	Hourly		
Published Rates	\$2,750.00	\$770.00	\$195.00	\$29.00	\$17.50	\$33.12
Adjustments						
Region (Illinois: 101.4%)	\$38.50	\$10.78	\$2.73	\$0.41		
Model Year (100%)	-	-	-	-		
Ownership (100%)	-	-	-	-		
Operating (100%)	-	-	-	-		
Total:	\$2,788.50	\$780.78	\$197.73	\$29.41	\$17.50	\$33.34

Rate Element Allocation

Element	Percentage	Value
Depreciation (ownership)	37%	\$1,017.50 / mo
Overhaul (ownership)	41%	\$1,127.50 / mo
CFC (ownership)	11%	\$302.50 / mo
Indirect (ownership)	11%	\$302.50 / mo
Fuel (operating) @ \$3.08	51%	\$8.87 / hr

Revised Date: 2nd Half 2010

Documentation Required in the Force Account Process

Force Account Bill

(Example 1)

ATTACHMENT 3

This sample bill does not establish any policy relative to the amount to be allowed for any particular item of materials or equipment or as representing actual rates for insurance. Its sole purpose is to standardize the form of force account bills.

SAMPLE OF A FORCE ACCOUNT BILL (USING 2007 BLUEBOOK RATES) SHOWING FORM TO BE FOLLOWED

CONTRACTOR'S LETTERHEAD

Route _____ Section _____ County _____ Auth. No. _____

Force account bill for _____ Additional Pipe & Collars _____ Contract No. _____

Insert applicable dates

	June 2007			Total Hours		Rate	Insurance Amount	Payroll Amount	Earnings to Date	Payroll Amount Eligible for Unemployment Tax	
	4	5	6	S.T.	O.T.					F.U.T.	S.U.T.
Matt Reilly, Foreman	6	8	10	22	2	15.60	\$374.40	\$390.00	\$35,000.00	\$0.00	\$0.00
Tim Seitz, Laborer	6	8	10	22	2	12.50	300.00	312.50	8,000.00	0.00	312.50
Bernie Henderson, Laborer	6	8	10	22	2	12.50	300.00	312.50	8,000.00	312.50	312.50
Earl Roth, Laborer	6	8	10	22	2	12.50	300.00	312.50	7,100.00	212.50	312.50
John Graham, Laborer	6	8	10	22	2	12.50	300.00	312.50	9,100.00	0.00	312.50
Sarah Reid, Truck Driver	6	8	8	22		14.50	319.00	319.00	27,000.00	0.00	0.00
Jeanmarie Smith, Operator	6	8	8	22		17.60	<u>387.20</u>	<u>387.20</u>	40,000.00	<u>0.00</u>	<u>0.00</u>
Subtotals, Labor							\$2,280.60	\$2,346.20		\$525.00	\$1,250.00
*Laborer Pension & Welfare Funds - 96 hours @ .32								30.72			
*Operating Engineer Pension & Welfare - 22 hours @ .55								12.10			
Subtotals, Labor								\$2,389.02			
Plus 35% of \$2,389.02								836.16			
Subtotals, Labor								\$3,225.18			
Plus: Workmen's Compensation Ins. 3.48% of \$2,280.60							79.36				
Public Liability and Property Damage Ins., excluding payroll of Truck Drivers 2.0% of \$1,961.60							39.23				
**Federal Unemployment Tax 0.8% of \$525.00							4.20				
***State Unemployment Tax 6.8% of \$1,250.00							85.00				
Federal Social Security Tax 7.65% of \$2,346.20							179.48				
Total Payroll Additives							387.27				
Plus 10% of \$387.27							38.73				
Total Labor								<u>426.00</u>			
								\$3,651.18			

*These are not suggested rates, as these rates vary widely between Union Locals. This is intended as an example only.

**Do not include costs for employees which have reached the \$7,000 ceiling on Federal Unemployment Tax (F.U.T.)

***Do not include costs for employees which have reached the \$11,500 ceiling for State Unemployment Tax (S.U.T.)

I hereby certify that the above statement is a copy of that portion of the payroll which applies to the above stated work and that the rates shown for taxes and insurance are actual costs.

(Signed) _____
(Contractor)

Documentation Required in the Force Account Process

Force Account Bill

(Example 1
continued...)

Discuss Example of Leased
Equipment and affidavit for
materials

Construction Memorandum 08-09

January 2008
Sheet 12 of 16

<u>Equipment Expense</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>Total Hrs</u>	<u>Rate</u>	<u>Amount</u>
2006 Caterpillar 814F Wheel Dozer, (240 HP)	6	8	8	22	\$100.50	\$2,211.00
2006 Chevy Light Duty Pickup Truck, 4X4 Crew Cab (1/2 ton)	6	8	10	24	\$11.86	\$284.64
2004 On-Hwy Rear Dump Truck, 4X4, Diesel, (30,000 lb GVW)	6	8	8	22	\$35.22	\$774.84
Total equipment expense						\$3,270.48

Material Used

24 in. R. C. P., 64 ft. @ \$4.30 per ft. (receipted invoice attached)	\$275.20
(Trench backfill, 48.6 tons @ \$0.85 per ton) (taken from stock)	41.31
Portland cement, 6 sacks @ \$1.60 (taken from stock)	9.60
(Aggregate, 1.5 tons @ \$1.40 per ton) (taken from stock)	2.10
(Form lumber, 24 pieces, 1x6, 14 feet long @ \$1.232 per piece) (receipted invoice attached)	29.57
Less salvage value of form lumber, 50%	(14.79)
Subtotal material	342.99
Plus 15% on \$342.99	51.45
Total material	\$394.44

AFFIDAVIT

This is to certify that the material entered on this force account bill which was taken from stock is shown at our cost.

Smith Construction Co.
(Company)

By R. L. Smith

Total Labor	\$3,651.18
Total Equipment Expense	3,270.48
Total Materials	<u>394.44</u>
Total	\$7,316.10
Bond 0.75%	54.87
Plus 10% of Bond	5.49
Total Bill	\$7,376.46

Resident

The End

Concluding Thoughts...

- *Extra Work Bill Spreadsheet* is available:
 - on the D-6 Resource Center Computers
 - IDOT Website
 - By e-mail
- For assistance with extra work bills contact Supportive Services for an appointment at the D6 Resource Center.
- Contact ESI or Hutson & Associates for bidding and estimating assistance

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