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## Transmittal



Washington State  
Department of Transportation

Memorandum

**DATE:** July 26, 2006

**TO:** Bill Ford

**THRU:** Suzanne Sergeant

**FROM:** Tom Baker

**SUBJECT:** Materials Laboratory Cost Recovery Rates for FY07

Attached is a book with a description of the development of the Materials Laboratory rates for Fiscal Year 2007. These rates were implemented effective July 1, 2006. This methodology is in compliance with OMB Circular A – 87, *Cost Principles for State, Local, and Indian Tribal Government*. This methodology has not changed since its implementation in July 1983.

These rates will need to be recalculated in September to reflect the salary changes that will be implemented in that period.

Materials Laboratory rates are charged through the Basic Accounting for Testing and Services, BATS, the Materials Laboratory billing systems. The same set of rates is used for all work orders.

**TEB:ss**

SJS

Attachment

cc: Ron Lorentson, Budget Services, 47422  
Don Nelson, E&EP, 47324

Washington State Department of Transportation  
Materials Laboratory  
Development of Cost Recovery Rates

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## Executive Summary

### *Labor Rate Summary and Comparison*

Activity	Rate Derivation	2006		2007	
		Reg Rate	OT Rate	Reg Rate	OT Rate
Lab Testing	R-1	\$ 80.87	\$ 89.09	\$ 83.55	\$ 92.22
Drafting and Data Analysis	R-2	\$ 84.21	\$ 93.89	\$ 87.93	\$ 98.47
Analysis, Reporting, and Review	R-3	\$ 90.92	\$ 102.80	\$ 94.04	\$ 107.05
Analysis, Reporting, and Review	R-3/2	\$ 45.46	\$ 51.40	\$ 47.02	\$ 53.53
Analysis, Reporting, and Review	R-3NB	\$ 34.90	\$ 65.63	\$ 35.59	\$ 37.92
Analysis, Reporting, and Review	R-3NW	\$ 42.51	\$ 63.77	\$ 44.51	\$ 47.76
Analysis, Reporting, and Review	R-3X2	\$ 181.84	\$ 205.60	\$ 188.08	\$ 214.11
Analysis, Reporting, and Review	R-3X5	\$ 454.60	\$ 514.00	\$ 470.21	\$ 535.27
Materials Inspection, HQ , No Travel	R-4	\$ 94.61	\$ 107.29	\$ 97.19	\$ 107.42
Materials Inspection, HQ, w/Travel	R-4T	\$ 104.56	\$ 117.25	\$ 107.22	\$ 117.45
Materials Inspection, Region	R-5	\$ 88.68	\$ 100.34	\$ 89.86	\$ 101.29
Materials Inspection, Region W/travel	R-5T	\$ 98.64	\$ 110.30	\$ 99.89	\$ 111.32
Prestress Inspection, HQ, No Travel,	R-6	\$ 88.96	\$ 100.75	\$ 91.30	\$ 103.25
Crosshole Sonic Testing	R-6CSL	\$ 100.13	\$ 110.52	\$ 117.90	\$ 129.13
Crosshole Sonic Testing with travel	R-6CSLT	\$ 110.09	\$ 120.48	\$ 127.93	\$ 139.16
Prestress Insp., HQ, In-State Travel,	R-6T	\$ 99.15	\$ 109.73	\$ 101.33	\$ 113.28
Assurance Inspection and Sampling	R-7	\$ 87.91	\$ 99.24	\$ 90.49	\$ 102.22
Plant Inspection, Production	R-8	\$ 88.96	\$ 100.75	\$ 87.94	\$ 98.55
Plant Insp w/trailer, one operator	R-8NW	\$ 87.73	\$ 95.95	\$ 90.69	\$ 99.46
Plant Insp w/trailer, two operators	R-8NW2	\$ 84.27	\$ 92.49	\$ 87.22	\$ 95.99
Plant Insp., Preliminary, PCC & ACP	R-8P	\$ 87.78	\$ 99.06	\$ 91.16	\$ 103.17
Equipment Inventory and Repair	R-9	\$ 82.41	\$ 91.06	\$ 83.92	\$ 92.75
Geotechnical Fieldwork	R-10	\$ 88.68	\$ 100.08	\$ 89.69	\$ 100.99
Field Soils Investigation w/o Equip	R-11	\$ 91.03	\$ 103.01	\$ 87.60	\$ 97.94
Soil ph & Resis	R-12	\$ 82.95	\$ 92.11	\$ 86.84	\$ 96.97
Pavement Coring, Single Operator	R-15P1	\$ 113.49	\$ 123.29	\$ 116.30	\$ 126.58
Pavement Coring, Two Operators	R-15P2	\$ 98.95	\$ 108.75	\$ 101.76	\$ 112.04
Traffic Control	R-16	\$ 84.44	\$ 94.26	\$ 90.18	\$ 101.77
Pavement Roughness Testing	R-17P1	\$ 204.69	\$ 217.89	\$ 180.26	\$ 187.51
Pavement Roughness Testing, No Travel	R-17P1NT	\$ 194.73	\$ 207.93	\$ 170.23	\$ 177.48
Pavement Roughness Testing, Two Operators	R-17P2	\$ 146.96	\$ 157.32	\$ 135.34	\$ 142.59
Pavement Roughness Testing, Two Operators, No Travel	R-17P2NT	\$ 137.00	\$ 147.36	\$ 125.31	\$ 132.56
Pavement Friction Testing, Two Operators, with Travel	R-18	\$ 121.99	\$ 130.39	\$ 108.13	\$ 116.09
Pavement Friction Testing, Two Operators, No Travel	R-18NT	\$ 112.03	\$ 120.43	\$ 98.10	\$ 106.06
Pavement Friction Testing, Single Operator, No Travel	R-18SONT	\$ 147.04	\$ 157.30	\$ 114.27	\$ 122.24
Pavement Friction Testing, Single Operator, with Travel	R-18SOWT	\$ 157.00	\$ 167.26	\$ 124.30	\$ 132.27
Deflection Testing	R-20	\$ 154.24	\$ 167.44	\$ 282.85	\$ 296.55
Deflection Testing, No Travel	R-20NT	\$ 144.28	\$ 157.48	\$ 272.82	\$ 286.52
Geotechnical & Engineering Review	R-21	\$ 92.43	\$ 105.47	\$ 98.50	\$ 113.24
Pavement Rating	R-26	\$ 77.62	\$ 84.61	\$ 79.96	\$ 87.07

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*Drilling Rate Summary and Comparison*

Activity	Rate Derivation	2006		2007	
		Reg Rate	OT Rate	Reg Rate	OT Rate
Test Drilling, No Travel, Truck Mounted Drill	R-23NT-01	\$ 94.33	\$ 102.39	\$ 99.11	\$ 108.52
Test Drilling, No Travel, Heavy Duty Drill	R23NT-02	\$ 95.89	\$ 103.95	\$ 100.67	\$ 110.08
Test Drilling, No Travel, Dutch Cone	R23NT-03	\$ 111.54	\$ 119.60	\$ 106.69	\$ 116.10
Test Drilling, No Travel, Skid Drill	R23NT-04	\$ 95.84	\$ 103.90	\$ 100.62	\$ 110.03
Test Drilling, No Travel, Skid Drill - Water	R-23NT-05	\$ 108.79	\$ 116.85	\$ 118.01	\$ 127.42
Test Drilling, No Travel, Drilling Inspector	R-23NT-06	\$ 85.43	\$ 95.69	\$ 85.25	\$ 94.66
Test Drilling, No Travel, Field Exploration Supervisor	R-23NT-07	\$ 93.91	\$ 106.61	\$ 87.66	\$ 97.07
Test Drilling, No Travel, Extra Person on Crew	R-23NT-08	\$ 82.58	\$ 91.57	\$ 85.25	\$ 94.66
Test Drilling, with Travel, Truck Mounted Drill	R-23WT-01	\$ 104.29	\$ 112.35	\$ 109.14	\$ 118.55
Test Drilling, with Travel, Heavy Duty Drill	R-23WT-02	\$ 105.85	\$ 113.91	\$ 110.70	\$ 120.11
Test Drilling, with Travel, Dutch Cone	R-23WT-03	\$ 121.50	\$ 129.56	\$ 116.73	\$ 126.13
Test Drilling, with Travel, Skid Drill	R23WT-04	\$ 105.80	\$ 113.86	\$ 110.65	\$ 120.06
Test Drilling, with Travel, Skid Drill - Water	R23WT-05	\$ 118.75	\$ 126.81	\$ 128.04	\$ 137.45
Test Drilling, with Travel, Drilling Inspector	R23WT-06	\$ 95.39	\$ 105.65	\$ 95.28	\$ 104.69
Test Drilling, with Travel, Field Exploration Supervisor	R23WT-07	\$ 103.87	\$ 116.57	\$ 97.69	\$ 107.10
Test Drilling, with Travel, Extra Person on Crew	R23WT-08	\$ 92.54	\$ 101.53	\$ 95.28	\$ 104.69

## Development of Cost Recovery Rates - Summary

### ***Introduction***

Cost recovery rates for Materials Lab Testing and Services are developed in two phases: a set of Schedules which includes common factors and calculations and a set of Rates which combine the various schedules to form the final cost recovery charges. This submission for cost recovery rates evaluated as of July 1, 2006, derives the schedules schematically and presents the format for the rate calculation.

The overall schedule and rate structure is unchanged from the previous submittal. In the discussion which follows, the rationale for the calculations will be presented and the sources of the particular information will be identified.

These cost recovery rates apply to all organizations within the consolidated Materials Laboratory: Lab, Drill Crew, and Inspection Section as well as the six individual region laboratories. Within this consolidated organization, many common tasks or activities are performed with different grade levels of staff depending on the available personnel within the organization. A major functional element is the weighted labor matrix for each activity. The information for this matrix is provided by analysis of each organization based on its own history and practices. From this combination, a weighted labor rate is computed. This weighted rate combined with other elements from the schedules forms the final cost recovery rate.

### ***Summary of Individual Recovery Rates***

Cost recovery rates are computed for each of a number of identified activities in the consolidated materials organization. Some of these activities are performed both in Headquarters and the Regions, some only occur in one area or another.

A summary of the numerical designations of the various activities and the work involved are provided for reference at the end of this section. Regardless of the locations, the basic structure is comprised of the weighted labor rate for the activity together with the appropriate overhead and / or equipment cost factors. Three elements are thus common to all rates: the weighted labor cost, the non chargeable labor cost, and the non labor overhead cost.

The weighted labor cost for each activity is determined by a labor rate matrix combining the staff level and classes used for that activity wherever it is performed. This labor cost is unique for each activity, even though it may vary by only a minor amount from another activity. The non chargeable labor cost is the same for all activities and is itself, derived from a labor rate matrix combining all the overhead personnel for the materials organization. The non labor overhead is also the same for all activities and is based on the computed overhead items other than labor which support the total Materials organization.

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In compiling the various cost rates, the first three items, then, are the same throughout.

1. Labor Cost
2. Non Chargeable Labor Costs (Schedule 1)
3. Non Labor Overhead Cost ( Schedule 2)

A significant number of the cost recovery rates are comprised of only these three elements. The actual rates, however, vary because the labor rate matrix which determines the labor cost is specific for that activity. The cost recovery rates which contain only these three elements are:

Rate Code	Description
R-1	Laboratory Testing
R-2	Drafting and Data Analysis
R-3	Analysis, Reporting and Review
R-5	Materials Inspection, Region
R-6R	Prestress Inspection, Region
R-6	Prestress Inspection, Service Center, No Travel
R-7	Assurance Sampling and Inspection
R-8	Plant Inspection, Production, PCC & ACP
R-8P	Plant Inspection, Preliminary, PCC & ACP
R-9	Equipment Inventory and Repair
R-10	Geotechnical Fieldwork
R-11	Field Investigation (without Equipment)
R-12	Membrane Resistivity, Soil pH & Resistivity
R-16	Traffic control
R-21	Geotechnical and Engineering Review
R-26	Pavement Rating

A second group of rates is developed by combing additional factors from the cost schedules to account for the various types of equipment in use, and for various modes of travel. Since the development uses the same initial three factors, only the additional cost schedules involved are listed. These rates and their various components are as follows:

<u>Rate Code</u>	<u>Description and Additive</u>
R-4	Materials Inspection, HQ, No Travel Vehicle Assigned Cost (Schedule 6)

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R-4T	Materials Inspection, HQ with Travel Subsistence and Lodging (Schedule 4) Vehicle Assigned Cost (Schedule 6 )
R-5T	Materials Inspection, Region with Travel Subsistence and Lodging (Schedule 4)
R-6T	Prestress Inspection, HQ, In-State Travel Subsistence and Lodging (Schedule 4) Vehicle Assigned Cost (Schedule 6)
R-6RT	Prestress Inspection, Region with Travel Subsistence and Lodging (Schedule 4)
R-6CSL	Crosshole Sonic Testing Vehicle Assigned Cost (Schedule 6) Equipment Cost (Schedule 15)
R-6CSLT	Crosshole Sonic Testing with travel Subsistence and Lodging (Schedule 4) Vehicle Assigned Cost (Schedule 6) Equipment Cost (Schedule 15)
R-8NWR	Plant Inspection with trailer, one operator Cost for Plant Inspection, NWR (Schedule 17)
R-8NWR2	Plant Inspection with trailer, two operators Cost for Plant Inspection, NWR (Schedule 17)
R-15P(1)	Pavement Coring, Single Operator Drill (Schedule 10)
R-15P(2)	Pavement Coring, Two Operators Core Drill (Schedule 10)
R-17P(1)	Pavement Roughness Testing, Profilometer, Single Operator Equipment Operated Cost (Schedule 12)
R-17NTP(1)	Pavement Roughness Testing, Profilometer Operator, No Travel Operated Cost (Schedule 12)
R-17P(2)	Pavement Roughness Testing, Profilometer, Double Operator Subsistence and Lodging (Schedule 4) Equipment Operated Cost (Schedule 12)
R-17NTP(2)	Pavement Roughness Testing, Profilometer, Double Operator, No Travel Equipment Operated Cost (Schedule 12)
R-18	Pavement Friction Testing Subsistence and Lodging (Schedule 4) Equipment Operated Cost (Schedule 14)
R-18NT	Pavement Friction Testing, No Travel Equipment Operated Cost (Schedule 14)
R-18SONT	Pavement Friction Testing, Single Operator, No travel Equipment Operated Cost (Schedule 14)

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R-18SONT	Pavement Friction Testing, Single Operator, No travel Subsistence and Lodging (Schedule 4) Equipment Operated Cost(Schedule 14)
R-20	Deflection Testing Subsistence and Lodging (Schedule 4) Equipment Operated Cost (Schedule 13)
R-20NT	Deflection Testing Equipment Operated Cost (Schedule 13)

The third group of rates are designated the R-23 series and it concerns drilling activities. It isn't necessary to detail all of the individual combinations. The series combines the use of equipment of various types, with or without travel (Subsistence and Lodging). All travel is based on a 4-10 work week.

***Summary of Labor Activities for Determination of Rates***

<u>RATE CODE</u>	<u>DESCRIPTION</u>
R-1	<u>Lab Testing</u> - Sample determinations made in Region or Headquarters Lab. Performed by regular testing personnel including section head and supervisor. May include sample tests performed by progress sampler or Region Fabrication Inspector where no test report is issued
R-2	<u>Drafting and Data Analysis</u> - Preparation of graphic material or computation of numerical data directly performed by the individual to include lab supervisors or lab technicians or drafters.
R-3	<u>Analysis, Reporting and Review</u> - Engineering analysis and review including preparation of engineering and Geotechnical reports, review of engineering plans and specifications, interpreting and analyzing field data. Performed generally by engineering personnel, section heads supervisors, Materials Engineer, and their principal assistants. May involve either office or field work and includes preparation and presentation of training. Also includes acceptance certification and review and Materials Engineer's and Section Head's activities in directing and performing field tests and studies.
R-4	<u>Materials Inspection (Headquarters) No Travel</u> - In plant or onsite inspection of fabricated materials by personnel of the Service Center inspection organization. Made within the local area not requiring overnight travel.

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- R-4T Materials Inspection ( Headquarters) Travel - Inspection as for rate R-4 but involving reimbursed overnight travel either in-state or out-of -state.
- R-5 Materials Inspection (Region)- Inspection of Materials for acceptance by the Region Fabrication Inspector. Typically involves in-plant pre-cast or warehouse sampling.
- R-5T Materials Inspection (Region), Travel - Inspection as for rate R-5 but involving reimbursed overnight travel.
- R-6R Prestress Inspection- Inspection of pre-stressed concrete products during fabrication. Performed by an inspector assigned to a Region Materials Organization.
- R-6RT Prestress Inspection, Travel- Inspection as for rate R-6 but involving reimbursed overnight travel.
- R-6 Prestress Inspection (Headquarters) No Travel- Inspection of pre-stressed concrete products by the staff of the HQ Fabrication Inspection section within the permanent duty station area.
- R-6T Prestress Inspection (Headquarters) Travel  
As Above, but on travel status.
- R-6CSL Crosshole Sonic Logging- Inspection with CSL equipment of concrete poured shafts
- R-6CSLT Crosshole Sonic Logging with Travel - As above but on travel status
- R-7 Independent Assurance Inspection and Sampling - Activities of the Region Independent Assurance Inspector and assistants in conducting the independent assurance sampling and inspection duties set forth by the Construction Manual.
- R-8 Plant Inspection, Production PCC and ACP - Inspection at an asphalt or concrete plant for work assigned to a specific contract . This type work would replace an inspection directly responsible to a specific project engineer.
- R-8P Plant Inspection, Preliminary PCC and ACP - Inspection of a Concrete or asphalt plant for qualification of the facility for acceptance for state work. Does not involve sampling and testing of materials during production.
- R-8NWR Plant Inspection with Trailer, one operator-Provide acceptance for HMA at paver's asphalt plant with one tester.

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- R-8NWR2 Plant Inspection with Trailer, two operators - Same as above except with two testers
- R-9 Equipment Maintenance and Repair - Self-explanatory, may be chargeable directly to a construction project in the case of excessive or unusual damage or calibration. May also be chargeable to TEF through a specific equipment number with concurrence from Equipment Supt. Lab Testing equipment excluded.
- R-10 Geotechnical Fieldwork - Field reading observation or test of a Geotechnical nature made by Technical level personnel
- R-11 Field Soils Investigation without Equipment - Inspection, evaluation and/or hand sampling for a soils or pavement investigation by technician personnel.
- R-12 Membrane Resistivity, Soil pH, Soil Resistivity - Self-explanatory.
- R-15P(1) Pavement Coring, Single Operator - Inspection, evaluation and sampling requiring core drilling to obtain samples and/or data.
- R-15P(2) Pavement coring , Two Operators – Same as above except with two operators
- R-16 Traffic Control - Flagging and sign erection connected with other activities such as chloride sampling, pavement coring, drilling, or FWD operation.
- R-17P2 Pavement Roughness Testing, Video/Profiler(Double Operator)- Performed by Headquarters Pavement section using the video/ profiler unit either pre-and post-construction or statewide inventory.
- R-17P2NT Pavement Roughness Testing, Video/Profiler(Double Operator) No Travel- Same as above except no travel
- R-17P1 Pavement Roughness Testing Video/Profiler(Single Operator )- Same as above except with a single operator.
- R-17P1NT Pavement Roughness Testing, Video/Profiler, (Single Operator), No Travel - Same as above except no travel.
- R-18WT Pavement Friction Testing - Operation of friction test vehicle by HQ Pavement section either pre - and post- construction or statewide inventory.
- R18NT Pavement Friction Testing, No, Travel – Same as above except no travel.

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- R-18SOWT Pavement Friction Testing, Single Operator, with Travel – Same as above except with single operator
- R-18SONT Pavement Friction Testing, Single Operator, No Travel – Same as above except no travel
- R-20 Deflection Testing - Pavement investigation involving the Falling Weight Deflectometer (FWD)
- R-20NT Deflection Testing, No Travel – Same as above except no travel.
- R-21 Geotechnical and Engineering Review - Technical evaluation and study by the Region Materials Engineer and Assistant involving complex study and technical details
- R-23 Drilling and Exploration Rates - Varies according to the combination of, series personnel, and travel status.
- R-26 Pavement Rating – Rating the condition of the pavement surface from digital images from the Pavement Condition Collection Van.

## Development of Cost Recovery Rates - Schedules

SCHEDULES	Existing Rate FY-06	New Rate FY-07
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1 Non Chargeable Labor Cost	30.60	29.41
2 Lab Overhead Cost	15.07	18.09
4b Per Diem, 4 – 10 Workweek	9.96	9.96
6 Equipment Cost, Personnel Carrying Equipment Materials Inspection	2.89	2.89
8 Assigned Cost, Drilling Support Equipment	2.41	2.41
10 Operated Cost Drilling Equipment Composite Rate		
a. Truck-Mounted Drill	11.45	11.45
b. Heavy Duty Drill	13.01	13.01
c. Dutch Cone	28.86	19.03
d. Skid Drill	25.92	24.37
e. Skid Drill, Barge (Water Work)	25.91	30.35
g1. Standard Core Drill, Single Operator	29.08	29.08
g2. Standard Core Drill, Two Operators	14.54	14.54
12P Pavement Roughness Measurement, Profilometer		
a. Single Operator	101.85	89.85
12P2 Pavement Roughness Measurement, Profilometer		
a. Dual Operator	50.93	44.92
13 Operated Cost, Deflectometer Vehicle		
a. Single Operator	51.40	177.26
14 Operated Cost Skid Test Truck & Trailer		
A. Single Operator	15.40	16.18
b. Dual Operator	30.80	32.36
15 Crosshole Sonic Logging	11.46	25.54
17 Plant Inspection, NWR		
a. One operator	6.93	6.93

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b. Dual operator 3.47 3.47

**Equipment Rates**

Rates shown are Assigned rates unless equipment is charged for both Assigned and Operated, then both rates are shown and labeled.

<u>Class</u>	<u>Description</u>	<u>FY-06</u>	<u>FY-07</u>
1-01	Sedan, Mid Size	2.14	2.14
1-10	Van; 6-9 Passenger	2.50	2.50
1-20	Utility Vehicle, Small, Light	2.70	2.70
2-2	Vans; Cargo	2.66	2.66
2-40	Van w/Road Profilometer	42.97	42.97
4-30	Truck, ¾ or 1 Ton; w/Service Body	3.88	3.88
5-5	1 Ton, Crew Cab; 4 X 2	4.31	4.31
5-6	1 Ton; Crew Cab; 4 X 4	4.54	4.54
5-11	1/4 Ton, Reg or Extend Cab, 4 X 4	2.85	2.85
5-20	½ Ton; Reg or Extend; 4 X 4	3.28	3.28
8-1	Truck and Trailer; Skid Tester	11.48	11.48
8-23	Truck; Flatbed; Single Axle, without Crane	4.66	4.66
8-25	Truck, Flatbed; Tandem Axle, with Crane	9.13	9.13
9-1	Truck, w/Earth Drilling Unit	12.86	12.86
9-2	Drill Unit; Track Mounted	14.34	14.34
9-3	Drill Unit, Trailer Mounted	3.91	3.91
9-4	Drill Unit; Skid Mounted	4.78	4.78
9-5	Drill Unit; Skid Mounted; Air Mobile	5.98	5.98
9-22	Truck; Drill Unit Support	10.03	10.03
9-30	Truck; Electronic Cone Penetrometer,	9.99	9.99
10-5	Tilt Trailer, 2 Axle, 40,000 Lbs	1.64	1.64
20-11	Outboard Boat,	2.63	2.63
20-13	Barge Drill w/Pusher Skiff	3.69	3.69
21-26	Deflectometer, Trailer Mounted	2.46	2.46
24-12	800 MHz Mobile Radios	0.24	0.24
25-02	Generator, 5.1 to 10 Kilowatt	1.10	1.10

### **SCHEDULE 1: NON CHARGEABLE LABOR COSTS**

The personnel breakdown was summarized from the Labor Rate Analysis forms submitted by the Regions and HQ Sections in June 2006. This breakdown is by Region and HQ for total FTE's, Non Chargeable Labor Cost FTE's, Production FTE's and Lab Testing FTE's.

The Non Chargeable Labor Costs includes labor cost of managers, supervisors, and support employees that perform tasks not chargeable to a specific WSDOT Work Order. Also includes production employees when performing non chargeable tasks such as: work area and equipment cleaning, training, inventory, safety meetings, specification development, research, equipment verification, and other tasks not chargeable to a specific WSDOT Work Order.

#### **Distribution of FTEs**

Region FTEs	Region Non Chargeable	Region Production	HQ FTEs	HQ Non Chargeable	HQ Production	Total FTEs	Total Non Chargeable	Total Production
69.6	30.4	39.3	152.3	60.5	91.8	222.0	90.9	131.1

The total personnel engaged in production work which includes testing, analysis, reporting, review, drafting, data analysis, source approval, materials inspection, and test drilling is 131.1.

#### **Calculating Non-Chargeable Hourly Rates**

Class Code	CLASS	RANGE	STEP K	REG RATE	OT RATE	Non Chargeable FTEs	Non Chargeable Extension
11	STATE MATERIALS ENGR	WMS4	\$9,116	\$73.57	\$99.51	1.0	73.57
WMS3	NWR MATERIALS ENGINEER	WMS3	\$7,471	\$61.81	\$80.44	0.9	55.63
WMS2	REGION MATERIALS ENGR	WMS2	\$6,498	\$54.54	\$70.57	3.1	168.53
WMS4	ASST MATERIALS ENGR - STATE LAB	WMS4	\$8,334	\$68.18	\$89.39	2.8	190.90
WMS2	ASST MATERIALS ENGR - REGION	WMS2	\$6,122	\$51.62	\$66.59	1.2	60.91
WMS3	SECTION HEADS	WMS3	\$7,179	\$59.58	\$77.41	3.6	214.49
WMS2	ASST SECTION HEADS	WMS2	\$6,831	\$57.05	\$73.96	3.4	195.68
66200	TRANS ENGR 5	67.00	\$6,246	\$52.48	\$67.76	1.1	55.10
66204	TR TECH ENGR 5	67.00	\$6,246	\$52.48	\$67.76	4.9	256.10
WMS2	ASST BIT MIX ENGR	WMS2	\$6,695	\$55.53	\$71.90	0.8	43.31
66180	TRANS ENGR 4	63	\$5,660	\$48.06	\$61.76	5.0	240.25
66160	TRANS ENGR 3	59	\$5,125	\$44.06	\$56.25	9.3	409.98
66140	TRANS ENGR 2	55	\$4,643	\$40.44	\$51.05	10.2	413.42
66100 66120	TRANS TECH 3 & TR ENGR 1	51	\$4,207	\$37.15	\$46.31	7.4	275.28
66080	TRANS TECH 2	46	\$3,722	\$33.45	\$40.99	5.4	179.04

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Class Code	CLASS	RANGE	STEP K	REG RATE	OT RATE	Non Chargeable FTEs	Non Chargeable Extension
66060	TRANS TECH 1	40	\$3,208	\$29.60	\$35.45	1.4	41.44
53830	CHEMIST 3	56	\$4,760	\$41.31	\$52.30	0.3	12.39
60320	ELECTRICAL ENGR 4	70	\$6,728	\$55.27	\$71.56	0.6	33.16
60300	ELECTRICAL ENGR 3	63	\$5,660	\$48.06	\$61.76	0.6	26.43
7284C	TRANS SYS TECH C	57	\$4,879	\$42.19	\$53.56	0.4	14.77
WMS2	MATERIALS LAB BUSINESS MGR	WMS2	\$6,629	\$55.27	\$71.56	1.0	55.27
100Q	SECRETARY, SUPERVISOR	40	\$3,208	\$29.60	\$35.45	1.0	29.60
143I	FISCAL ANALYST 1	40	\$3,208	\$29.60	\$35.45	1.0	29.60
143J	FISCAL ANALYST 2	44	\$3,540	\$32.14	\$39.10	1.0	32.14
100K	OFFICE ASSISTANT LEAD	33	\$2,712	\$25.92	\$35.45	1.0	25.92
100J	OFFICE ASSISTANT 3	31	\$2,588	\$24.99	\$28.81	6.7	167.43
77970	SUPPLY OFFICER 2	46	\$3,722	\$33.45	\$40.99	1.0	33.45
1000	SECRETARY SENIOR	33	\$2,712	\$25.92	\$30.15	5.4	139.19
75720	PLANT MANAGER 2	49	\$4,003	\$35.61	\$44.10	1.0	35.61
626L	MAINT MECH 3	48E	\$3,908	\$34.88	\$43.05	1.0	34.88
626J	MAINT MECH 1	41E	\$3,286	\$30.18	\$36.27	1.0	30.18
261C	LIBRARY & ARCHIVAL PROF 3	53	\$4,421	\$38.76	\$48.63	0.8	31.01
3286	IT SYSTEMS/APPLICATION SPEC 6	66	\$6,095	\$51.33	\$66.19	1.0	51.33
479M	INFO TECH SPEC 5	62	\$5,522	\$47.04	\$60.37	2.0	94.08
03293	INFO TECH SPEC 3	54	\$4,531	\$39.57	\$49.80	0.8	31.66
479J	INFO TECH SPEC 2	50	\$4,106	\$36.37	\$45.18	2.0	72.74
Non-Chargeable Rate:				\$ 29.41	Totals:	90.9	\$3,854.49

The distribution of the Non Chargeable Labor Rate is made by dividing the combined labor cost extension for Non Chargeable Labor by the total of production personnel.

**Calculation**

$$\frac{\text{Labor Cost Extension}}{\text{Total Personnel}} = \frac{\$3854.49^1}{131.1} = \underline{\underline{\$29.41/\text{hour}}}$$

**SCHEDULE 2: LABORATORY OVERHEAD**

Materials lab overhead is defined as expenditures, other than labor, that cannot be direct charged to projects. The steps for determining Materials Lab overhead is summarized as follows:

1. Determine expenditures (excluding labor) for the previous fiscal year – this is the “baseline”
2. Make line item adjustments to the baseline for major differences or changes in expenditures when comparing the baseline to the coming year (e.g. a new project of significant expense such as document imaging)

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3. Subtract equipment and travel costs that will be recovered through the rates
4. Apply an inflation factor to those expenditures that were "carried forward" from the previous fiscal year (i.e. excludes expenditures from step 2 & 3)
5. Add up the total annual overhead (i.e. inflation adjusted expenditures and line items)
6. Divide the total by the number of production FTEs (per schedule 1)
7. Divide the result by number of hours a production hours in a year (1,790) to determine the hourly overhead rate

**FY 2007 Calculation (see appendix A for details)**

Previous Year Expenditures (Baseline)	\$4,575,246
Less Equip & Travel Recovered Through Rates	<u>1,281,771</u>
Unadjusted Overhead Costs	\$3,293,475
Plus Net Line Item Adjustments:	<u>860,782</u>
Adjusted Overhead Costs	\$4,154,257
Inflation (1.9% in 2007)	<u>\$91,394</u>
Inflation Adjusted Overhead Costs	\$4,245,651
Divided by Number of Production FTEs	<u>131.08</u>
Overhead Cost per Production FTE	\$32,390
Divided by Production Hours in Year	<u>1790</u>
Hourly Lab Overhead Rate	\$18.09

**SCHEDULE 4: Per Diem**

Schedule 4a & 4b Per Diem for Traveling Crews (four ten-hour days)										
Subsistence					Lodging			Combined Cost		
	Breakfast	Lunch	Dinner	Subtotal	Nights Stay	Average Cost/Night	Total Lodging	Total	Nightly	Hourly
Monday		13.00	20.00	33.00						
Tue - Wed	11.00	13.00	20.00	88.00						
Thursday	11.00	13.00		24.00						
				\$145.00	3	\$85.41	\$256.23	\$401.23	\$133.74	\$10.03

**SCHEDULE 6: MATERIALS INSPECTOR VEHICLES**

Personnel Carrying Equipment: Materials and Prestress Inspection Equipment rates for FY 02 only have assigned cost for class 1 thru 5. Rate for cost recovery can be obtained by factoring assigned cost against expected work time and weighting based on the units assigned to inspector use.

Schedule 6 Materials Inspector's Vehicles					
Vehicle Type	Category	No. of Vehicles	Assigned Hourly Rate	Assigned Yearly Rate	Cost Per Labor Hour
MiniVan	01-10	10	2.50	50,200.00	
Pickup	05-11	1	2.85	5,722.80	
SUV	01-20	4	2.70	21,686.40	
		<b>15</b>		<b>\$ 77,609.20</b>	<b>\$ 2.89</b>

**Calculation**

Assigned rate x number of units x 2,008 hours, based on 2,008 hour/ year assigned time

Notes:

1. Based on 2,008 hr/year/piece equipment.
2. Personnel engaged in materials and prestress inspection
3. Number of hours per labor-year.

**SCHEDULE 8: ASSIGNED COST DRILLING SUPPORT EQUIPMENT**

Schedule 8 Drill Crew Pickups									
Category	Vehicle Type	No.	Assigned Hourly Rate	Assigned Yearly Rate	No. of drillers & helpers	# of FES	Total No. Employees	Cost Per Person	Cost Per Labor Hour
5-5	4X4,3/4crew cab PU	3	4.31	25,963					
5-6	4X4, 1 Ton Crew Cab	3	4.54	27,349					
5-8	4X4,1Ton,CrwCab,Ds I	2	4.09	16,425					
5-11	4X4, 1/4 Ton	1	2.85	5,723					
5-20	4X4, 1/2 Ton	1	3.28	6,586					
				<b>\$82,047</b>	<b>16</b>	<b>3</b>	<b>19</b>	<b>\$ 4,318.26</b>	<b>\$ 2.41</b>

**Calculation**

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Cost per labor hour equals assigned rate x number of units x 2,008 hours, based on 2,008 hour/ year assigned time. Drilling rates calculated on basis of cost recovery for 2-person crew with inspector as separate charge.

*Notes:*

1. *Based on 2,008 hr/year/piece equipment.*
2. *Total personnel involved in test drilling (8 crews, driller and helper only, 3 Field Exploration Supervisor)*
3. *Number of hours per labor-year.*

**SCHEDULE 10: DRILLING EQUIPMENT OPERATED AND ASSIGNED COST**

Starting in FY06, equipment in TEF was charged only assigned time. This assigned time is based on 2008 hour in a year. All major drilling equipment except for the Dutch Cone and Air Mobil skid drill is figured at 100% usage.

- Dutch Cone( B-61) 18%
- Truck Mounted Drill (BK-81) 100%
- Heavy Duty Drills 100%
- Skid Drills (09 – 04) 100%
- Skid Drill, Air Mobile(09 – 05) 30%
- Support Trucks 100%

**10a - Truck-Mounted Drill**

Schedule 10 Drill Equipment & Support Equipment						
10a - Truck - Mounted Drill	Subclass	Description	Assigned Rate	Equip Total	No in Crew	Per Hour Charge
	09-01	BK-81 / CME 55	12.86			-
	09-22	Support Truck	10.03			
				<b>22.89</b>	<b>2</b>	<b>11.45</b>

**10b - Heavy Duty Drills**

There are two types of equipment which have substantial ability to increase production. These will be used for the more demanding drilling assignments.

The track-mounted CME drill (Subclass 9 - 2) requires a trailer (subclass 10-5). The trailer assigned cost is redistributed to an operated cost as follows:

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10b - Heavy Duty Drill	Subclass	Description	Assigned Rate	Equip Total	No in Crew	Per Hour Charge
	9-22	Support Truck	10.03			
	10-5	Trailer	1.64			
	9-2	CME Drill	14.34			
				<b>26.01</b>	<b>2</b>	<b>13.01</b>

**10c. - Dutch Cone**

In the past, the Dutch Cone was mounted as an accessory on 08L47001, the B-61 truck mounted drill. The new Dutch Cone is a self contained unit and is only used for Dutch Cone work. Redistribution of the test cone assigned cost is based on 18% usage.

10c - Dutch Cone	Subclass	Description	Assigned Rate	Hours of Use	No in Crew	Per Hour Charge
	09-30	Dutch Cone	9.99	527	2	
				<b>350</b>	<b>2</b>	<b>19.03</b>

**10d. - Skid Drill**

While capable of significantly different production rates, these two types of units have similar costs.

10d - Skid Drill	Subclass	Description	Assigned Rate	Hours of Use	Adjusted Rate	No in Crew	Per Hour Charge
	21-55	Drill (2)	4.78	2,008	4.78		
			4.78	2,008	4.78		
	9-5	Skid Drill, Air Mobile	5.98	600	20.01		
		Weighted Average	15.54	46.16	6.76		
	9-22	Support Truck	10.03	2,008	10.03		
	8-25	Boom Truck	9.13	2,008	9.13		
					<b>25.92</b>	<b>2</b>	<b>12.96</b>

**10e. - Skid Drill - Water Work**

This activity requires auxiliary floating and support equipment in addition to the drill unit. Estimated usage is 600 hours per year.

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10e - Tripod or Skid Drill - Water Work	Subclass	Description	Assigned Rate	Hours of Use	Adjusted Rate	No in Crew	Per Hour Charge
	9-04	Drill	4.78	2008	4.78		4.78
	9-22	Support truck	10.03	2008	10.03		10.03
	20-11	Outboard boat	2.63	464	11.38		2.63
	8-23	Flatbed truck	4.66	1400	6.68		4.66
	25-2	Generator	1.10	464	4.76		1.10
	20-13	Barge, Pontoon	3.69	464	15.97		3.69
	10-5	Trailer	1.64	464	7.10		1.64
					<b>60.70</b>	<b>2</b>	<b>30.35</b>

**INCIDENTAL DRILLING - REGION PAVEMENT CORING**

The class 5 vehicles used to transport the core drills are distributed over the laboratory overhead leaving the recovered cost item to be the core drill itself. Depending on the operation, the core drill can be operated by either a single operator or with two operators.

**10g1 – Standard Core Drill, Class 9 – 3, Trailer Mounted Drill, Single Operator**

10g1 - Standard Core Drill	Subclass	Description	Assigned Rate	Hours of Use (BATS)	Adjusted Rate	No in Crew	Per Hour Charge
	9-3	Trailer Mounted Drill	3.91	270	29.08	1	
					<b>29.08</b>	<b>1</b>	<b>29.08</b>

**10g2 - Standard Core Drill, Class 9 – 3, Trailer Mounted Drill, Two Operators**

10g2 - Standard Core Drill	Subclass	Description	Assigned Rate	Hours of Use (BATS)	Adjusted Rate	No in Crew	Per Hour Charge
	9-3	Trailer Mounted Drill	3.91	270	29.08	2	
					<b>29.08</b>	<b>2</b>	<b>14.54</b>

**SCHEDULE 12: PAVEMENT ROUGHNESS MEASUREMENT,  
 PROFILOMETER EQUIPMENT**

Schedule 12 P-1 Pavement Roughness Measurement Profilometer Equipment							
Subclass	Description	Assigned Rate	Hours of Use (BATS)	Adjusted Rate	No in Crew	Per Hour Charge	
02-40	Profilometer	45.64	1020	89.85	1		
				<b>89.85</b>	<b>1</b>		<b>89.85</b>
Schedule 12 P-2 Pavement Roughness Measurement Profilometer Equipment							
Subclass	Description	Assigned Rate	Hours of Use (BATS)	Adjusted Rate	No in Crew	Per Hour Charge	
02-40	Profilometer	45.64	1020	89.85	2		
				<b>89.85</b>	<b>2</b>		<b>44.92</b>

**SCHEDULE 13: OPERATED COST, DEFLECTOMETER VEHICLE  
 (FWD)**

Schedule 13 FWD						
Subclass	Description	Assigned Rate	Hours of Use (BATS)	Adjusted Rate	No in Crew	Per Hour Charge
2-2	Van	2.66	58	92.09	1	
21-26	FWD	2.46	58	85.17	1	
				<b>177.26</b>	<b>1</b>	<b>177.26</b>

**SCHEDULE 14: OPERATED COST SKID TEST TRUCK AND TRAILER**

Schedule 14 Skid Test						
Subclass	Description	Assigned Rate	Hours of Use (BATS)	Adjusted Rate	No in Crew	Per Hour Charge
08-01	Truck, Skid Test	11.48	952	24.21	2	
10-40	Trailer, Skid Test	3.86	952	8.14	2	
				<b>32.36</b>	<b>2</b>	<b>16.18</b>

**SCHEDULE 15: CROSSHOLE SONIC LOGGING SYSTEM**

Schedule 15 Crosshole Sonic Logging System						
Subclass	Description	Assigned Rate	Hours of Use (BATS)	Adjusted Rate	No in Crew	Per Hour Charge
40-07	SL System	1.94	305	12.77	1	
40-07	SL System	1.94	305	12.77	1	
				<b>25.54</b>	<b>1</b>	<b>25.54</b>

**SCHEDULE 165: NUCLEAR GAGE TESTING**

**16a - Nuclear Gage Wipe Test**

Schedule 16a Nuclear Gauge Wipe Tests R-3NW (S839 - Used by NWR)								
Subclass	Description	Cost	R-3 Rate	R-3 OT Rate	Hrs to Complete		Per Unit Charge	Per Unit Charge
NA	Wipe Test Kit	21.00					21.00	21.00
9-22	Direct Charge		\$94.04	\$107.05	0.25		23.51	26.76
							<b>44.51</b>	<b>47.76</b>

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**16b - Nuclear Gage Badge Test**

<b>Schedule 16b Nuclear Gauge Badge Tests R-3NB (S840 - Used by NWR)</b>								
Subclass	Description	Cost	R-3 Rate	R-3 OT Rate	Hrs Per Quarter	No of Badges	Per Unit Charge	Per Unit Charge
9-04	Badges	75.00					18.75	18.75
9-22	Direct Charge		\$94.04	\$107.05	24.00	134.00	16.84	19.17
							<b>35.59</b>	<b>37.92</b>

**SCHEDULE 17: COSTS FOR PLANT INSPECTION-NWR**

<b>Schedule 17 Costs for Plant Inspection- NWR</b>							
Subclass	Description	Quantity	Assigned Rate	Annual Cost	Yearly Usage	Hourly Rate for 1 Operator	
10A25	Lab Trailers	1	1.95	3,915.60			
40-03	ACP Vacuum Test Kit	2	0.18	722.88			
41-11	Portable Counter Top Oven	2	0.16	642.56			
41-7	Gyratory Compactor	1	1.14	2,289.12			
41-03	Sieve Shaker	1	0.13	261.04			
41-19	Aggregate Test Kit	1	0.12	240.96			
41-33	NCAT Asphalt Content Tester	1	0.35	702.80			
40-02	Electronic Balance	2	0.09	361.44			
42-02	SE Shaker	1	0.06	120.48			
	Utilities			400.00			
	Propane			50.00			
				<b>9,706.8</b>			
					<b>8</b>	<b>1,400</b>	<b>6.93</b>

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<b>Schedule 17-2 Costs for Plant Inspection- NWR</b>						
Subclass	Description	Quantity	Assigned Rate	Annual Cost	Yearly Usage	Hourly Rate for 2 Operators
10A25	Lab Trailers	1	1.95	3,915.60		
40-03	ACP Vacuum Test Kit	2	0.18	722.88		
41-11	Portable Counter Top Oven	2	0.16	642.56		
41-7	Gyratory Compactor	1	1.14	2,289.12		
41-03	Sieve Shaker	1	0.13	261.04		
41-19	Aggregate Test Kit	1	0.12	240.96		
41-33	NCAT Asphalt Content Tester	1	0.35	702.80		
40-02	Electronic Balance	2	0.09	361.44		
42-02	SE Shaker	1	0.06	120.48		
	Utilities			400.00		
	Propane			50.00		
				<b>9,706.88</b>		
					<b>1,400</b>	<b>3.47</b>

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## Appendix A – Lab Overhead Detail

Object Code	Object of Expenditure	Total Dollars FY06	Fab Insp	Drill Crew	FWD	Skid & Profiler	Core Drills	Other (-)	Other (+)	Subtotal	With 1.9% Inflation
CA02	MEDICAL AID HEALTH SERVICES	300								300	306
CD01	COMPUTER AND INFO SERVICES	12,372								12,372	12,607
CF01	TECHNICAL RESEARCH SERVICES	14,001							60,000	74,001	75,407
CJ01	EMPLOYEE TRAINING SERVICES	277								277	283
EA00	SUP & MATERIALS PAYMENT BY QP	3,524								3,524	3,590
EA01	SUPPLIES & MATERIALS	372,326								372,326	379,400
EA04	MICROCOMPUTERS SUPPLIES/MATRLS	10,985								10,985	11,193
EA05	SAFETY FOOTWEAR	3,792								3,792	3,864
EA06	PROTECTIVE & SAFETY CLOTHING	5,356								5,356	5,458
EA08	TELEPHONES NON-INVENT/NON-CAP	2,939								2,939	2,995
EA09	ROAD PATCHING MATERIALS-VENDRS	34								34	35
EA21	LIGHT REFRESHMENTS	893								893	910
EA79	INVENTORY ISSUES-DEBIT	20,849								20,849	21,245
EB01	COMMUNICATIONS - TELEPHONE	16,784								16,784	17,103
EB02	COMMUNICATIONS - OTHER	14,789								14,789	15,070
EB03	COMMUNICATIONS-CELLULAR PHONES	59,354								59,354	60,482
EB04	COMMUNICATIONS - DATA LINES	6,057								6,057	6,172
EC01	UTILITIES - GENERAL	29,370								29,370	29,928
EC02	UTILITIES-NATURAL/PROPANE GAS	41,023								41,023	41,802
EC05	UTILITIES-ELECTRICITY	68,051								68,051	69,344
EC08	HAZARDOUS MATERIAL DISPOSAL	2,829								2,829	2,882
ED00	RENT & LEASES PAYMENT BY QP	1,881								1,881	1,917
ED02	TEF EQUIP RENTAL-OPER TEF EQUIP	902,188	15,110	580,989	6,525	122,468	39,256			177,096	180,461
ED03	RENT & LEASES-ALL OTHER PROPER	10,791								10,791	10,996
ED07	RENT & LEASES - COPY MACHINES	33,571								33,571	34,209
ED15	TEF EQUIP RENTAL - MATS LAB	611,822							9,707	621,528	633,338

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Object Code	Object of Expenditure	Total Dollars FY06	Fab Insp	Drill Crew	FWD	Skid & Profiler	Core Drills	Other (-)	Other (+)	Subtotal	With 1.9% Inflation
ED19	TEF EQUIP RENTAL-ENGR FIELD EQ	753								753	767
EE00	REPAIRS PAYMENT BY QP	66								66	68
EE01	GEN REPAIR/ALTERATIONS/MAINT	26,509								26,509	27,013
EE02	MAINTENANCE-INFO TECH PRODUCTS	80,271								80,271	81,796
EE03	MAINTENANCE-COPIERS & FAX	3,292								3,292	3,354
EF01	PRINTING SERVICES	17,245								17,245	17,573
EF02	BOOKS, WRITTEN MATERIALS	9,800								9,800	9,986
EG01	TRAINING REGISTRATION FEES	15,082								15,082	15,369
EG02	CONFERENCE/TECH MEETS/SEMINARS	10,473								10,473	10,672
EG04	AUDIO - VISUAL AIDS	559								559	570
EG06	DUES/MEMBERSHIPS/ASSOC FEES	10,892								10,892	11,099
EG10	PROFESSIONAL AND OCCUP LICENSE	3,816								3,816	3,889
EG18	EMPLOYEE RECOGNITION AWARDS	1,296								1,296	1,321
EG19	EMP RECOGNITION AWARDS TAXABLE	550								550	560
EG94	REGISTRATION FEES TRIP NUMBER	5,153								5,153	5,251
EJ01	SUBSCRIPTIONS	2,102								2,102	2,142
EL03	DATA COMMUNICATION SERVICES	121								121	123
EM01	ATTORNEY GENERAL SERVICES	3,026								3,026	3,083
ER00	PURCHASED SVCS PAYMENT BY QP	147								147	149
ER06	OTHER SERVICES	42,921							50,680	93,601	95,380
ER07	JANITORIAL & CLEANING SVCS	18,843								18,843	19,201
ER09	LIBRARY SERVICES	169								169	172
ER11	LAUNDRY RENTAL SERVICES	23,033								23,033	23,471
ER12	FREIGHT SERVICES	3,923								3,923	3,998
ER13	SVCS RENDERED BY TEF TO MVF	12,921								12,921	13,166
ER15	SVCS REND BY OTHER WA ST AGCY	5,023								5,023	5,118
ER16	SVCS RENDERED BY OTHER GOVT	860								860	876
ER18	PRIVATE TESTING SERVICES	10,027								10,027	10,217
ER24	PHYSICAL EXAMS	992								992	1,011

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Object Code	Object of Expenditure	Total Dollars FY06	Fab Insp	Drill Crew	FWD	Skid & Profiler	Core Drills	Other (-)	Other (+)	Subtotal	With 1.9% Inflation
ER27	INFORMATION TECH SUPPORT	602,374						602,374	767,378	767,378	781,958
ER28	INSTALL/REPAIR DATA LINES	9,063								9,063	9,235
ER30	COMMUTE TRIP REDUCTION	50								50	51
ES04	OUTSIDE REPAIRS TEF/WSF	7,056								7,056	7,190
ES08	PROPANE/OTHR GASSES/TANK RENTL	5,744								5,744	5,853
ES67	MOTOR FUEL - GASOLINE	14								14	15
ES71	TEF RENTAL EQ/WSF PARTS&SUPPLY	3,414								3,414	3,479
EZ01	OTHER GOODS AND SERVICES	674								674	686
EZ02	ADVERTISING	22,697								22,697	23,128
EZ03	ASSESSMENTS	241								241	246
EZ97	MANUFACTURED SIGNS	201								201	205
GA01	IN-STATE SUBSISTENCE/LODGING	484,226	33,004	314,663		22,834				113,726	115,887
GA02	IN-STATE SUBSISTENCE TAXABLE	1,137								1,137	1,158
GB01	IN-STATE AIR TRANSPORTATION	14,102								14,102	14,370
GC01	PRIVATE AUTOMOBILE MILEAGE	17,708	419	516						16,773	17,092
GC15	PRIV AUTO MILEAGE-NON EMPLY	215								215	219
GD01	OTHER TRAVEL EXPENSES	11,244	2,245	2,121		59				6,819	6,948
GD02	OTHER TRAVEL EXP-EMPL RELOCATE	16,502	487							16,014	16,318
GD03	MEALS WITH MEETINGS	245								245	249
GD04	OTHER TRAVEL EXPENSES TRIP NUM	16,655	0							16,655	16,972
GD15	OTHER TRAVEL EXPENSES-NON EMPL	698								698	711
GF01	OUT-STATE SUBSISTENCE/LODGING	15,514	12,925	431						2,159	2,200
GF02	OUT-STATE SUBSISTENCE TAXABLE	166	166							0	0
GF04	OUT-STATE SUB/LODGE TRIP NUMB	65,494	37,997							27,497	28,020
GF15	OUT-STATE SUBS/LODGN-NON EMPLY	2,812								2,812	2,865
GG01	OUT-STATE AIR TRANSPORTATION	-3,906								-3,906	-3,981
GG04	OUT-STATE AIR TRANS TRIP NUMB	24,660								24,660	25,129
GG15	OUT-STATE AIR TRANSP-NON EMPLY	4,442								4,442	4,526
GN02	TEF EQUIP RENTAL-PER W/EQUIP	292,162	77,609	5,723	6,225					202,605	206,454

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Object Code	Object of Expenditure	Total Dollars FY06	Fab Insp	Drill Crew	FWD	Skid & Profiler	Core Drills	Other (-)	Other (+)	Subtotal	With 1.9% Inflation
JA01	EQUIPMENT-NON INV/NON CAPITAL	193,488							96,655	290,143	295,656
JA02	EQUIP-NON CAPITAL DONATED OTEF	7,562								7,562	7,705
JA04	EQUIP-INVENTORIED-NON CAPITAL	14,995								14,995	15,280
JA06	IT HARDWARE INV/NON-CAP/S&A	10,460								10,460	10,659
JA07	IT SOFTWARE INVENTORIED	40,885							62,480	103,365	105,329
JA08	IT HARDWARE NON-INV/NON-CAP	8,909								8,909	9,078
JC02	CAPITALIZED EQUIP DONATED TEF	5,436								5,436	5,540
JC03	INFO TECH EQUIP-INV/CAP ASSET	45,156							80,000	125,156	127,534
JJ01	GROUNDS DEVELOPMENT	480								480	489
JK01	ARCHITECTURAL/ENGINEERING SERV	20,529							297,000	317,529	323,562
NZ18	EMPLOYEE RECOG AWARDS-CASH PMT	285								285	290
PC01	OTHER DEBT SERVICES	95								95	97
PD01	PRINCIPAL-OST LEASE/PURCHASE	24,027								24,027	24,483
PE01	INTEREST-OST LEASE/PURCHASE	10,417								10,417	10,614
TE73	OSC PRINTING SERVICES	19,816								19,816	20,193
TE75	GEOGRAPHIC SERVICES	1,083								1,083	1,103
	TOTAL									4,154,257	4,245,651
					Production FTEs					131	
					Hourly Non Labor Expense Rate					\$ 18.09	

## Rate Manual Supplement, March 2007:

### ***Temporary Rate Increase***

On February 15, the State Materials Engineer requested a temporary, 6.7% rate increase to offset higher than anticipated labor and IT development costs. The Budget Division approved the request on February 16. The rate increase will become effective March 1, 2007 and run through June 30, 2007.

**State Materials Engineer Memo Requesting Temporary Rate Increase**

February 12, 2007

TO: Doug Vaughn  
MS: 47422

FROM: Thomas E. Baker  
709-5401

SUBJECT: Request for Temporary Rate Adjustment at the State Materials Laboratory

The State Materials Lab has determined that a temporary, across-the-board rate adjustment of 6.7% is needed to balance recoveries with expenditures by the end of the fiscal year. Significant, mid-year, increases in labor cost rates and higher than anticipated IT development costs are the primary drivers for the increase. I propose that this temporary rate increase be placed into effect for the period March 1, 2007 through June 30, 2007.

The mechanics of the implementing the rate increase are somewhat complex and labor intensive and we will need to proceed quickly once we receive your approval from your office. Thank you.

Approved: \_\_\_\_\_  
Doug Vaughn  
Budget Director, Finance and Administration Division

Date: \_\_\_\_\_

TEB:ss

SJS  
Attachment

Cc: Don Nelson, E&EP, 37324  
Ron Lorentson, Budget Services, 47422

Washington State Department of Transportation  
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**Attachment**

**Detail: Materials Lab End-of-Year Shortfall**

Month	Original Forecast	Adjustments		Adjusted Forecast		Net Recoveries
	Expenditures	IT	Labor Costs	Expenditures	Revenue	
Feb-06	\$ 1,486,933	\$ 50,000	\$ 60,000	\$ 1,596,933	\$ (1,344,624)	\$ 252,309
Mar-06	\$ 1,915,869	\$ 50,000	\$ 60,000	\$ 2,025,869	\$ (1,637,777)	\$ 388,092
Apr-06	\$ 1,555,524	\$ 50,000	\$ 60,000	\$ 1,665,524	\$ (1,637,071)	\$ 28,452
May-06	\$ 1,731,534	\$ 50,000	\$ 60,000	\$ 1,841,534	\$ (1,960,276)	\$ (118,742)
Jun-06	\$ 1,925,489	\$ 50,000	\$ 60,000	\$ 2,035,489	\$ (2,091,830)	\$ (56,341)
<b>Total</b>				<b>\$ 9,165,349</b>	<b>\$ (8,671,579)</b>	<b>\$ 493,770</b>

Shortfall                               \$ 493,770  
Rate Increase Needed               6.7%

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**Budget Division Memo Approving Temporary Rate Increase**




Washington State  
Department of Transportation

Memorandum

February 15, 2007

TO: Tom Baker/47365

FROM: Doug Vaughn   
360-705-7401

SUBJECT: Materials Laboratory Temporary Rate Adjustment

Pursuant to Chapter 9 of the WSDOT Accounting Manual, Budget Services (Finance and Administration) has reviewed and approves the adjustment in rates for Material Laboratory services that will be in effect from March 1, 2007 through June 30, 2007.

If you have any questions, please contact Ron Lorentson at 705-7581. Thank you.

DV:rl

cc: Don Nelson, E&E, 47321  
Bill Ford, F&A, 47400  
Cheryl Munday, Division Services, 47324  
Ron Lorentson, Budget Services, 47422

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## Temporary Rate Adjustments

### Labor Rate Summary and Comparison

Activity	Rate Derivation	2007 Jul - Feb		2007 Mar - June	
		Reg Rate	OT Rate	Reg Rate	OT Rate
Lab Testing	R-1	\$83.55	\$92.22	\$89.15	\$98.40
Drafting and Data Analysis	R-2	\$87.93	\$98.47	\$93.82	\$105.07
Analysis, Reporting, and Review	R-3	\$94.04	\$107.05	\$100.34	\$114.22
Analysis, Reporting, and Review	R-3/2	\$47.02	\$53.53	\$50.17	\$57.12
Analysis, Reporting, and Review	R-3NB	\$35.59	\$37.92	\$37.97	\$40.46
Analysis, Reporting, and Review	R-3NW	\$44.51	\$47.76	\$47.49	\$50.96
Analysis, Reporting, and Review	R-3X2	\$188.08	\$214.11	\$200.68	\$228.46
Analysis, Reporting, and Review	R-3X5	\$470.21	\$535.27	\$501.71	\$571.13
Materials Inspection, HQ , No Travel	R-4	\$97.19	\$107.42	\$103.70	\$114.62
Materials Inspection, HQ, w/Travel	R-4T	\$107.22	\$117.45	\$114.40	\$125.32
Materials Inspection, Region	R-5	\$89.86	\$101.29	\$95.88	\$108.08
Materials Inspection, Region W/travel	R-5T	\$99.89	\$111.32	\$106.58	\$118.78
Prestress Inspection, HQ, No Travel,	R-6	\$91.30	\$103.25	\$97.42	\$110.17
Crosshole Sonic Testing	R-6CSL	\$117.90	\$129.13	\$125.80	\$137.78
Crosshole Sonic Testing with travel	R-6CSLT	\$127.93	\$139.16	\$136.50	\$148.48
Prestress Insp., HQ, In-State Travel,	R-6T	\$101.33	\$113.28	\$108.12	\$120.87
Assurance Inspection and Sampling	R-7	\$90.49	\$102.22	\$96.55	\$109.07
Plant Inspection, Production	R-8	\$87.94	\$98.55	\$93.83	\$105.15
Plant Insp w/trailer, one operator	R-8NW	\$90.69	\$99.46	\$96.77	\$106.12
Plant Insp w/trailer, two operators	R-8NW2	\$87.22	\$95.99	\$93.06	\$102.42
Plant Insp., Preliminary, PCC & ACP	R-8P	\$91.16	\$103.17	\$97.27	\$110.08
Equipment Inventory and Repair	R-9	\$83.92	\$92.75	\$89.54	\$98.96
Geotechnical Fieldwork	R-10	\$89.69	\$100.99	\$95.70	\$107.76
Field Soils Investigation w/o Equip	R-11	\$87.60	\$97.94	\$93.47	\$104.50
Soil ph & Resis	R-12	\$86.84	\$96.97	\$92.66	\$103.47
Pavement Coring, Single Operator	R-15P1	\$116.30	\$126.58	\$124.09	\$135.06
Pavement Coring, Two Operators	R-15P2	\$101.76	\$112.04	\$108.58	\$119.55
Traffic Control	R-16	\$90.18	\$101.77	\$96.22	\$108.59
Pavement Roughness Testing	R-17P1	\$180.26	\$187.51	\$192.34	\$200.07
Pavement Roughness Testing, No Travel	R-17P1NT	\$170.23	\$177.48	\$181.64	\$189.37
Pavement Roughness Testing, Two Operators	R-17P2	\$135.34	\$142.59	\$144.41	\$152.14
Pavement Roughness Testing, Two Operators, No Travel	R-17P2NT	\$125.31	\$132.56	\$133.71	\$141.44
Pavement Friction Testing, Two Operators, with Travel	R-18	\$108.13	\$116.09	\$115.37	\$123.87
Pavement Friction Testing, Two Operators, No Travel	R-18NT	\$98.10	\$106.06	\$104.67	\$113.17
Pavement Friction Testing, Single Operator, No Travel	R-18SONT	\$114.27	\$122.24	\$121.93	\$130.43
Pavement Friction Testing, Single Operator, with Travel	R-18SOWT	\$124.30	\$132.27	\$132.63	\$141.13
Deflection Testing	R-20	\$282.85	\$296.55	\$301.80	\$316.42
Deflection Testing, No Travel	R-20NT	\$272.82	\$286.52	\$291.10	\$305.72
Geotechnical & Engineering Review	R-21	\$98.50	\$113.24	\$105.10	\$120.83
Pavement Rating	R-26	\$79.96	\$87.07	\$85.32	\$92.90

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**Drilling Rate Summary and Comparison**

Activity	Rate	2007 Jul - Feb		2007 Mar - June	
	Derivation	Reg Rate	OT Rate	Reg Rate	OT Rate
Test Drilling, No Travel, Truck Mounted Drill	R-23NT-01	\$99.11	\$108.52	\$105.75	\$115.79
Test Drilling, No Travel, Heavy Duty Drill	R23NT-02	\$100.67	\$110.08	\$107.41	\$117.46
Test Drilling, No Travel, Dutch Cone	R23NT-03	\$106.69	\$116.10	\$113.84	\$123.88
Test Drilling, No Travel, Skid Drill	R23NT-04	\$100.62	\$110.03	\$107.36	\$117.40
Test Drilling, No Travel, Skid Drill - Water	R-23NT-05	\$118.01	\$127.42	\$125.92	\$135.96
Test Drilling, No Travel, Drilling Inspector	R-23NT-06	\$85.25	\$94.66	\$90.96	\$101.00
Test Drilling, No Travel, Field Exploration Supervisor	R-23NT-07	\$87.66	\$97.07	\$93.53	\$103.57
Test Drilling, No Travel, Extra Person on Crew	R-23NT-08	\$85.25	\$94.66	\$90.96	\$101.00
Test Drilling, with Travel, Truck Mounted Drill	R-23WT-01	\$109.14	\$118.55	\$116.45	\$126.49
Test Drilling, with Travel, Heavy Duty Drill	R-23WT-02	\$110.70	\$120.11	\$118.12	\$128.16
Test Drilling, with Travel, Dutch Cone	R-23WT-03	\$116.73	\$126.13	\$124.55	\$134.58
Test Drilling, with Travel, Skid Drill	R23WT-04	\$110.65	\$120.06	\$118.06	\$128.10
Test Drilling, with Travel, Skid Drill - Water	R23WT-05	\$128.04	\$137.45	\$136.62	\$146.66
Test Drilling, with Travel, Drilling Inspector	R23WT-06	\$95.28	\$104.69	\$101.66	\$111.70
Test Drilling, with Travel, Field Exploration Supervisor	R23WT-07	\$97.69	\$107.10	\$104.24	\$114.28
Test Drilling, with Travel, Extra Person on Crew	R23WT-08	\$95.28	\$104.69	\$101.66	\$111.70