



## UNDERSTANDING LABOR-UNITS

### Introduction

Estimating with labor-units is both a science and an art form. Science in the sense that the labor required to complete a task is a function of the materials to be installed or activities to be performed and their quantities. If you know the quantity of each material required for a job, you can easily determine the labor required. An art form in the sense that you need to become creative in making some adjustments to the labor-units for the specific job conditions.

### What Exactly Is A Labor-Unit

A labor-unit represents the approximate time required to install materials or perform activity. Many trades people estimate a job based on how long they think it would take them to do the job. There are many factors that they might not have taken into consideration such as supervision, job layout, tool management, handling of the material, non-productive time and job conditions.

### How Labor-Units Are Used

To determine the labor required for a job, you must determine the material/activities required and their quantities. With this information you use the labor-units to determine the total labor required.

### What's Included In The Labor-Unit

A labor-unit is comprised of six major components, they include:

1. Installation or major activity - 50%
2. Job Layout - 15%

## Featured DBE

### DBE Advocate

Anita Bellant-Metropolitan Airports Commission

**Q: Where are you going?**

A: I have accepted a 1 year assignment with the airport police.

**Q: Why are you going?**

A: I have been doing this work for 14 years and the everyday challenges that I used to learn from are no longer there. I am seeking new learning opportunities, besides my background is in criminal justice.

**Q: What did you find most challenging about DBE, WBE, WBE advocacy?**

A: It is difficult to see the pendulum swing back on the issue of affirmative action. Affirmative action policies have been weakened and that has allowed some communities and/or organizations to disregard the program for what it is meant to be, an economic development tool.

**Q: What did you find most rewarding about DBE, MBE, and WBE advocacy?**

A: The business owners I met have this entrepreneurial spirit. They work 60 and 80 hours a week doing whatever it takes to make the business successful. The entrepreneurial spirit is refreshing and contagious, in a good way.

**Q: Do you think that you will re-enter the field of DBE, WBE and MBE?**

A: Sure, I may be back in a year in my current position but my goal would be to re-enter the industry as a successful WBE, MBE or DBE.

3. Material Handling - 10%
4. Nonproductive Time - 5%
5. Supervision - 10%
6. Tool Handling - 10%

## How To Develop Your Own Labor-Units

To develop your own labor-units, you must have information on past labor performance of similar jobs. Track job hours and compare them against the job's budgeted hours. After a while you will gain the knowledge necessary to adjust your labor for the next job. In addition, past job performance is useful for bid analysis.

## Variables That Impact Labor-Units

There is no set of labor-units that can be applied to all jobs; they must be increased or decreased to accommodate varying job conditions. Some of these variables can be controlled and others must be accommodated. It generally makes more sense to adjust the total labor-hours or sub-total labor-hours rather than each individual labor-unit for the varying conditions.

As you can see, it requires a lot of thought to estimate the labor for a given job, but with labor-units and experience you should begin to pull ahead of your competitors.

Skilled/Unskilled	Data	Total	%
Skilled	Sum of Total Hours	306242.45	
	Sum of Hours Minorities	39508.30	12.9%
	Sum of Hours Women	13633.80	4.5%
Unskilled	Sum of Total Hours	122547.30	
	Sum of Hours Minorities	25016.80	20.4%
	Sum of Hours Women	3954.75	3.2%
Total Sum of Total Hours		428789.75	
Total Sum of Hours Minorities		64525.10	15.0%
Total Sum of Hours Women		17588.55	4.1%

\* Figures reflect MNTC employment participant for July 2002

Contractors/Consultants	Total Contract Amount	Total Paid to Date	DBE Paid to Date	(1) DBE % Actual to Date	(2) DBE % Total Contract Value	Target DBE % Goal
Minnesota Transit Constr. (MnTC)	305,738,819	146,145,041	20,552,924	14.06%	6.72%	15%
Other Contractors	4,517,270	4,001,647	622,091	15.55%	13.77%	15%
O'Brien Kreitzberg (OBK) (3)	14,411,331	7,229,850	1,631,903	22.57%	11.32%	15%
Marsh	545,000	305,000	76,281	25.01%	14.00%	5%
Other Consultants	37,929,765	31,647,641	720,851	2.28%	1.90%	15%
<b>SUB-TOTAL:</b>	<b>363,142,185</b>	<b>189,329,179</b>	<b>23,604,050</b>	<b>12.47%</b>	<b>6.540%</b>	
Other Commitments *	58,763,594	58,029,138	N/A	N/A	N/A	N/A
<b>TOTAL:</b>	<b>421,905,779</b>	<b>247,358,317</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>

\* ROW, Cooperative Agreements, Other Direct Costs, etc. (1) Calculates DBE percentage based upon DBE dollars expended vs. contract dollars paid to-date (actuals). (2) Calculates DBE percentage based upon DBE dollars expended vs. total contract value.

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## Labor-Unit Manuals, Which Should You Use?

You should consider purchasing a comprehensive labor-unit manual that contains at least 10,000 labor-units. They generally cost less than \$100.

Adapted from article at <http://www.mikeholt.com/business/esummary.htm>.