



# Labor Productivity in Xactimate<sup>®</sup> Pricing

# Table of Contents

Introduction .....	3
Direct vs. net yield .....	4

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# Introduction

Labor productivity is often the largest variable in any construction or repair job. For the Xactimate pricing product, productivity is defined as the time needed to complete a task and can be affected by many factors beyond the standard high-level differences between new construction and remodeling or repair, such as accessibility, location, and quantity of work being performed. Additionally, each job may require many other supporting or peripheral tasks that will affect productivity regardless of whether the job is new construction or repair.

Take the examples of painting a room's interior and replacing or installing a new exterior door. Properly estimating the amount of labor needed requires knowledge and consideration of at least the following:

- Room painting:
  - Are there contents in the room and must they be completely moved out and reset?
  - Is the finished flooring in place?
  - Are there electrical fixtures and plates that must be removed?
  - Is the trim-work stain or paint grade?
  - How many colors and coats are required?
  - Must an existing color be matched?
  - What additional prep work or masking is required?
  - What is the size of the room(s) being painted?
- Door replacement or installation:
  - Must an existing door be removed and will the existing lockset be used on the new door?
  - Is the rough-opening adequate for a standard-sized door?
  - Must the opening be adjusted or the new door trimmed?
  - Must the door's jamb be extended or trimmed?
  - Is the new door being cleaned and prepped for paint?
  - How many doors are being replaced or installed?

Given the variables listed above, each of these two apparently singular tasks (painting a room and replacing a door) has now been expanded into multiple possible scenarios that will affect the job's time and cost. Some of these supporting tasks could occur regardless of whether the job is defined as new construction or repair or remodel.

With the large variety of task combinations, how can a database of standardized unit prices address this variability? Xactimate® solution handles this issue by breaking out those tasks that don't always branch out into separate line items that can be added when needed.

As a result, the primary line item (e.g., wall and ceiling painting or door replacement) targets the average lowest common denominator for labor productivity.

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This means that if certain tasks can be reasonably assumed to always occur on a job, they're included in the labor yield of the line item. If they're not always incurred, those tasks should be added as additional line items by the user.

Additionally, the labor productivity "per unit" (i.e., per door or per square foot of painting) increases substantially as the quantity of units involved in the work increases. It's important to understand that Xactimate's labor yields are based on a common job size scenario. When a job size is smaller than the common scenario, additional labor can be added using either the automated Labor Minimum adjustment or by adding items from the Labor (LAB) category.

## Direct vs. net yield

No discussion of labor productivity is complete without summarizing and understanding the differences between direct and net yield. As outlined in the Retail Labor and Supporting Events white paper:

- Direct yield is the amount of labor expended directly on the finished task, excluding time spent on breaks, setup, clean-up, etc. In other words, direct yield is the highest level of efficiency that can be achieved when all labor waste factors are excluded.
- Net yield is the actual labor productivity, which is the result of factoring in assumed time for breaks, setup, clean-up, etc. The net yield is achieved by applying a waste percentage supporting event factor to the direct yield.

The following figures display the Direct Yield, Supporting Events, and Net Yield for the Seal and Paint line items.

Item Activity Information

Category: PNT Selector: SP+ Activity: +(Replace) Phase: 09 Painting (Interior)

Material: \$0.15  
 Equipment: \$0.00  
 Retail Labor: \$0.45  
 Market Conditions: \$0.03  
 Replace Price: \$0.63

Material: Contractor Supplied \$0.15 + Non-Contractor Supplied \$0.00

Labor: Worker's Wage \$0.19 + Labor Burden \$0.09 + Labor Overhead \$0.17

Details

Type	Description	Price Per Unit
Labor	Painter	0.450
Material	Latex paint	
Material	Painter's putty	0.002
Material	160 - 180 grit sandpaper - per sheet	0.001
Material	PVA - latex drywall primer/sealer	0.044

Definition Assembly Info Supporting Events

Type: Labor  
 Component Code: PNT  
 Supporting Events: PNT-LAB (18.255)  
 Description: Painter  
 Yield = Direct Yield \* (1 - (Supporting Events / 100))

Direct Yield = 113.120 sq.ft. per hour  
 Net Yield = 92.470 sq.ft. per hour  
 Supporting Events = 18.25% of time wasted

Direct Yield: 113.120  
 Component Price: \$40.940 /HR  
 Yield: 92.470  
 Price Per Unit: \$0.450  
 Price Per Unit = Component Price / Yield

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In addition to addressing the assumed “wasted” labor, the supporting events percentages used within Verisk’s published price lists also address assumed waste on materials when applicable. In fact, the supporting events, from a labor perspective, are the only factors that create the differences between the “new construction” and “restoration” pricing published by Verisk. The difference occurs when the restoration supporting events take into account an additional amount of time for “working in a restoration environment.” This includes factors such as having to set up the work or cutting area outside the structure, working and being cautious around contents, etc.

Selecting the Supporting Events tab will display the assumptions used within the selected component.

Definition Assembly Info Supporting Events Sales Taxes Base Service Charge

Labor assumption is based on an 8 hour day with breaks, set up/clean up, and overall loss of productivity from working in a restoration environment.

Tasks involved in the assumed Supporting Events percentage

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It’s critical, however, to make an important distinction between the supporting events assumption, which is built into the line item’s labor productivity, and the time needed to address the various other potential labor tasks as outlined above in the painting and door replacement scenarios.

The supporting events that are included in the line item productivity are those that are assumed to always be incurred. As noted above, these include time to set up, clean up, take breaks, etc. While the need to move out and reset a room’s contents when painting is certainly a required “supporting event”

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to the painting work, it isn't built into the supporting events assumption of that line item because it's not always incurred. As such, content manipulation and other peripheral tasks that are not always incurred are split into separate line items as discussed earlier.

In summary, labor productivity can be highly variable and even the best of estimators can misjudge the hours needed to complete a task. It's critical that users know how to access and see the assumed productivity, including supporting events, and understand each line item's definition regarding what is and isn't included in each labor-related task in Verisk's published price lists.

The Verisk team recommends making adjustments directly to the unit price, the item's labor productivity, or by adding extra line items when the actual job conditions don't match the assumptions built into the line item price.

Please contact Verisk's Pricing Data Services if you have any questions about labor yields and productivity.

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