

Quantifying the Loss in Labor Productivity: the MCAA Factors

Executive summary. There are very few “court-accepted” ways a contractor can quantify his or her loss as a result of labor productivity, or lack thereof. MCAA’s (Mechanical Contractors Association of America, Inc.) document *PD 2 Factors Affecting Labor Productivity* is one of the most widely used methods in practice. See here for the MCAA Management Methods Manual containing Bulletin PD2. [QR]



What is loss of labor productivity? In construction there are dozens, if not hundreds, of ways that contractors can lose money. Some may be self-inflicted, and some may be caused by effects and conditions outside the control of the contractor. When events outside the control of the contractor cause the contractor to work inefficiently, a financial claim is born for that financial loss in labor.



What kinds of labor loss are we talking about? The MCAA has developed several causes of loss of productivity and attached to these causes a minor, average, and severe factor. The causes of loss of labor productivity follow:

MCAA’s Bulletin PD2 – Factors Affecting Labor Productivity			
Stacking of Trades	Morale and Attitude	Reassignment of Manpower	Crew Size Inefficiency
Concurrent Operations	Dilution of Supervision	Learning Curve	Errors and Omissions
Beneficial Occupancy	Joint Occupancy	Site Access	Logistics
Fatigue	Ripple	Overtime	Season and Weather Change

Each of these factors are described in a narrative form inside the manual reference above.

How is the loss calculation performed? The formula is pretty simple:

- Step 1.** Gather the estimated change order craft hours for the activity.
- Step 2.** Chose the factor(s) which affected your labor productivity (if there was more than one factor then they are additive).
- Step 3.** Multiple Step 1 by Step 2.
- Step 4.** The result of this multiplication in Step 3 is the impact to you in the number of manhours.
- Step 5.** Multiply the number of manhours by the cost per manhour.

Although the approach in the five steps listed above follows the directions from the manual, it is best for the user to read the manual and understand its applicability.

Does it work? Yes, this is a widely accepted method of calculating a loss in productivity and then converting the loss in hours to dollars. However, it's far from bulletproof. It's still very subjective. Most contractors do not have adequate documentation and any claim is up to severe scrutiny the opposing party.

My story. I've used this method before to calculate loss on a job. It has been effective. But, anyone who has been in construction claims knows that it will be subject to scrutiny as discussed above. I like to use it as a starting point for negotiation. The gold standard is the "measured mile" where we hope to say that "we should have laid 100 LF per day, but because you impacted me in x, y, and z ways, I only laid 75 LF per day. You owe me all costs resulting from that slower performance in work Mr./Ms. Owner." Work safe!

