BY KYLE DIAMOND

Tracking the Cost of Labor

I'm a second-generation building and remodeling contractor in New York state, managing the company that my father started many years ago. (My dad, Dale Diamond, is still a partner in the company, working sometimes in the cabinet shop and sometimes in the field.)

In recent years, I've made the transition from working in the field to running the business full time. As part of that transition, I'm putting a lot of work into creating systems that help the company run better. The goal is to set our company apart from the competition with a distinctive process that adds value for our customers, so that we are able to charge more money.

Written systems not only set us apart, but also take some pressure off me. A well-structured set of written systems lets me delegate some of the work of running the company to other people and still be confident that those tasks are getting done in an organized and consistent way. In this column, I'll describe one of the systems that we've created: a process for tracking the hours worked by our employees in the field and putting that information to good use in our company.

Our system has several components: There's a smartphone app (see below) that our workers use to report their hours each day, broken out by job task; there's a back-end interface (see page 32) that lets Kristen Detheridge, our office manager, tabulate and organize the information our field crews send in; and there's a simple set of spreadsheets Kristen can use to generate weekly labor tracking reports that she and I review together every Monday (see page 34).

Then, at the end of each job, Kristen plugs the labor and materials information for that job into a final gross-profit report (see page 36) that I can use to evaluate the profitability of that particular job. This job-by-job postmortem helps me set our company's strategic course.

COLLECTING THE DATA: GOOGLE FORMS

There are many apps on the market for reporting labor hours; one popular example is Tsheets (tsheets.com), which is owned by Intuit, the maker of QuickBooks. But we chose to use a Google-based method because it's free and it works. The field interface of our labor

Smart reporting. Google Drive lets the author create a customized smartphone form that his field crews can use to report their labor hours each day, breaking their time down by task.
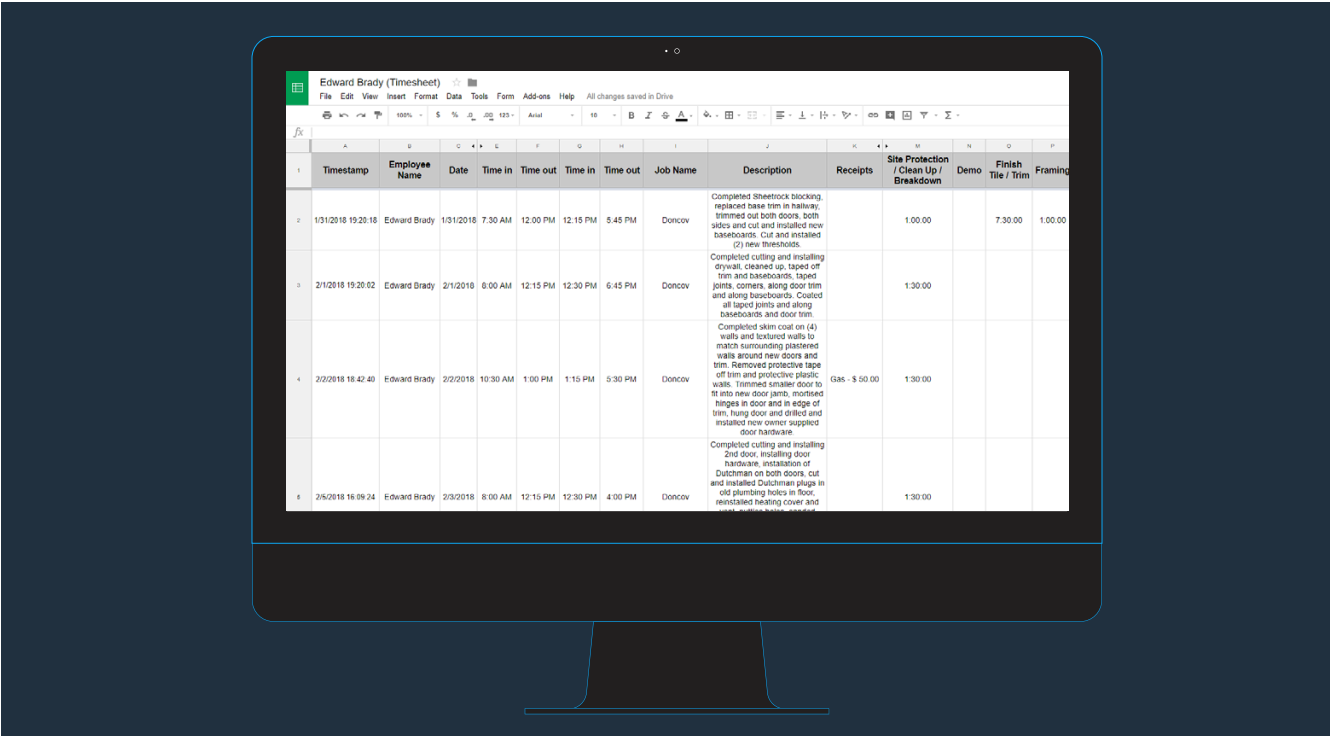
Labor reporting "back end." Daily hours reported by the author's employees on site dump directly to a Google Sheet in the cloud, which the company's office manager can view on her desktop computer. Total hours for each employee, hours spent on specific tasks, and descriptions or comments from the employees all appear in an organized format, in a continually updated permanent record. The office manager then copies and pastes the information into Excel for processing and analysis.

tracking system—the part we use to collect information from our crew members—is based on Google Drive. Google provides a variety of customizable interactive forms that integrate with the online spreadsheet functionality of Google Sheets. Google's customizable survey response form offers various ways for people to respond: drop-down lists, check boxes, multiple choice questions, text boxes—you can even take a snapshot with a phone camera and upload it to the drive.

Kristen has modified Google's simple template with questions and response options appropriate to the work our people do. Using that form, our workers can punch in their total hours worked each day, along with a simple breakdown of the time spent on particular tasks. (They can also let the office know about any materials and supplies they need—an added capability that often comes in handy.)

Kristen updates the form as necessary with a current list of jobs in progress and the various tasks that might be happening on those jobs. She emails each worker a link to a version of the updated form that is personalized for that individual; when workers click on the link, the form opens up on their smartphone. They can pin the form

to their phone's screen so it's available any time. Then, at the end of every day, our workers on each job take out their smartphones and fill out their forms.

The customization helps. As a business manager, I've come to understand that too much information is worthless. With labor tracking, there's a risk that you can get lost in the details and give yourself so much granular information that it's confusing instead of clarifying. So it's nice that Kristen can tailor the Google forms to suit our information needs. Even on a large project, I prefer to use big, broad categories: "site protection," "demo," "framing," "tile," "clean-up," and so forth. You could get bogged down wondering, "Was that cleanup after demo, or cleanup after framing?" Or, "Was that wall layout, or building headers, or what?" But my system doesn't ask my workers to split hairs.

I also let my people know that I'm not asking them to track their time spent on any of those broad categories to the minute; recording time on a task to the nearest half hour is fine. When I use the information later—to estimate future jobs, for example, or to assess whether the current job is on track and predict when it will be completed—I think in terms of "worker days," not worker hours.

Date	Site Protection	Demo		Framing		Management	Roof / Plywood		Siding		Plumbing / Electric	
Friday Close	Labor	Labor	Materials	Labor	Materials	Labor	Labor	Materials	Labor	Materials	Labor	Materials
01/05/18	8	20.5	$300.78	46.75	$5,525.71	2	2			$441.47		
01/12/18	10.5	1.5	$122.25	105.5	$523.28	1	31.75	$603.71	14.5	$2,627.12		
01/19/18	2.25	7.25							79.25			$1,670.33
01/26/18	6.75					5			62		60.75	
02/02/18	1.25					1			63.25	$59.46	38	
02/09/18	1			16					58		7	$3,190.69
02/16/18	0.75			5.5					6.5			$1,495.12
02/23/18	6										2	
03/02/18	5.25									$492.95	8.5	
03/09/18	2										22.5	
Budgeted	45	30	$750.00	170	$5,500.00	20	20	$680.00	250	$3,700.00	160	$6,300.00
Remaining	1.25	0.75	$326.97	-3.75	-$548.99	11.00	-13.75	$76.29	-33.50	$79.00	21.25	-$56.14
Total	43.75	29.25	$423.03	173.75	$6,048.99	9	33.75	$603.71	283.5	$3,621.00	138.75	$6,356.14

Labor tracker. The customized Excel spreadsheet form shown above helps the author review his ongoing labor and materials cost for each job on a weekly basis. In the example shown, framing labor and materials exceeded the author's estimate, as did labor in the "Roof / Plywood" category. Noticing this kind of pattern in his weekly review of the job numbers helps the author catch problems early and make adjustments.

I'm certainly not thinking about worker minutes. When my people are reporting to me, the nearest half hour is close enough.

Google Forms automatically dumps to a Google Sheet, the spreadsheet capability of Google Drive. That's the "back end" of our information-gathering system. Every day, all the reports from all our workers show up on one Google Sheet that Kristen can view on her desktop computer. Every Monday morning, she starts her week by opening up the Google Sheet to work with the labor data from the previous week.

PROCESSING THE DATA: EXCEL

The next step is to organize our data and structure it into a compact form that I, as the business owner, can use efficiently for decision making, planning, sales, estimating, financial reporting, and so forth. Google Sheets could be used to massage the data like that, but Microsoft Excel is much more powerful for that sort of work. So every Monday, Kristen manually copies and pastes our incoming labor information from Google Sheets into our customized Excel spreadsheet.

We typically have anywhere from two to five jobs going at any given time. Kristen's Excel "sort sheet" lets her take each worker's individual reported hours and allocate them to the different jobs that person worked on that week. Then, she can assemble a report for each job, listing all the work performed on that job by all our crew members that week. She goes on to break down that labor time based on categories of work: demolition, framing, tile, finish, cleanup, and so forth.

APPLYING THE DATA: REPORTS

From the point of view of our workers in the field, the reason for reporting labor hours is so that they can get paid (including tracking time-and-a-half for overtime, if they've earned that); and of course, that's the reason the state requires us to keep good records of everyone's hours worked. We archive a record of each worker's daily time sheet for that purpose. We also transfer our total cost of labor into QuickBooks so that we can generate accurate tax reports.

But our labor-tracking system does much more than just help us pay our people and pay our taxes. Taken together, our simple communication and organizing tools give us a reliable and efficient

Employee		Hours	Adj Rate	Adj Rate	Rate
Ryan		200.00	100%	200.00	27.00
James		100.00	100%	100.00	27.00
Ed		70.00	92%	64.40	23.00
Steve		71.00	62%	44.02	15.50
Isaiah		50.00	68%	34.00	17.00
Ben		145.00	92%	133.40	23.00

Date Completed:	1/30/2017
Customer Name:	
Division/Type:	Bathroom
Zip Code:	12545
Estimator:	Kyle
Crew Leader:	Kyle
Job Leader:	Ryan

Estimated Hours:	1202
AWO Hours:	0
PUSH BACK HOURS:	0
HOURS (Over)/Under:	626.1
Productivity %:	209%
Grade:	A+

Contracted Price:

Labor (in-house)	84,131.31
Materials	6,765.80
Subcontractors	41,933.10
Other	
Contracted Revenue	$ 132,830.21

Sales Rate:	110.52
AWO Sales Rate:	-
Total Sales Rate:	$110.52

Add'l Work Order(s):	
TOTAL REVENUE	**$ 132,830.21**

Actual Average Wage	$ 23.58
Budgeted Actual	$ 25.00

Job Costs:

Direct Labor Gross Wages	$ 14,995.50	11%
Direct Labor Burden + Ins	$ 5,125.46	4%
Job Materials:**	$ 6,765.80	5%
Subcontractors	$ 41,933.10	32%
Add'l Material/Expense		0%
TOTAL REVENUE	**$ 68,819.86**	52%

Gross Profit	**48.2%**

Actual Gross Profit	$ 64,010
Revenue Per Man Day	$ 1,671
(TOTAL) Actual Rev Per/Hr	$ 208.85
Labor Only Rev/Hr	$ 132.28

Gross profit tracker. The author uses a standard Excel form that compiles and aggregates all the cost information from each job his company completes, packaged as a concise statement of gross profit. At the end of each job, this form presents a comparison of the estimated labor and materials cost in the job contract with the actual labor and materials cost. In this example, the company's gross profit was 48%, making the job a success—and perhaps a clue to help guide strategy.

way to keep jobs on track. They provide me with information I need to create good estimates. They give me an objective way to evaluate how productive each of my employees is. By keeping me aware week by week of how our jobs are progressing, they let me know how soon I need to have the next job teed up to keep our people busy, and how soon I can promise the next client that we will show up and get started. And they help me identify the kinds of jobs that are most profitable for our company, so I can target that kind of work with my marketing and sales operation.

As I mentioned earlier, too much data is worthless. But well-organized data is priceless. So, after assembling and sorting the information, Kristen prints out a one-page "Labor Tracker" report on each job. Then the two of us meet to go over the data for all the jobs we have in progress that week.

Every Monday morning at that routine meeting, I familiarize myself with the progress on each job. I can compare the actual labor time so far for each phase of the job with the hours I had allowed for that work. If we're 10 hours over budget on framing, I'll know it. When there's a discrepancy, I'll ask the crew—what happened here? Did I get something wrong? If I see that we're falling behind on a

job, maybe I can make an adjustment to catch us back up.

Many times, a difference in the numbers reflects an "extra." On one recent job, we were building a mahogany deck, and in the middle of the job, the client decided that she also wanted a mahogany walkway. The next week, those extra hours showed up on the Labor Tracker, and it reminded me to separate out the hours for that portion of the job so that Kristen could bill for the work separately under the appropriate change order.

Periodically, I look back and analyze our labor numbers, looking for patterns that help me understand the big picture and evolve our company's strategy. At the bitter end of every job, after we've completed all the work and received our final payment, Kristen creates a "Gross Profit Tracker" report for that job. This one-page graphic report displays final labor and materials costs for each job, including estimated and actual costs for employee labor. It breaks out the employee labor totals by individual employee.

The Gross Profit Tracker helps me develop important insights. I want to know job by job how we are doing in terms of gross profit; but more importantly, I want to look for trends. What is our sweet spot? Is there anything we are doing exceptionally well? Are there

things we are exceptionally bad at? Is it a certain job size that we do well, or poorly? Are my estimates accurate? Am I making a suitable profit, or should I adjust my pricing? I don't want to make that kind of decision based on gut feelings—I want to base those decisions on the real numbers.

"TOO MUCH INFORMATION IS WORTHLESS. BUT WELL-ORGANIZED INFORMATION IS PRICELESS."

We're still early in our process of developing this big-picture view. But now that we're starting to accumulate an organized record of our labor productivity and profitability, I'm already seeing some interesting things. For example, I've learned from various sources that the category of site protection, setup, and cleanup usually amounts to about 12% of total job cost, industry-wide. Looking at our own data, I see that we're pretty close to that number: For us, that category is typically about 13% of our job cost.

It's also useful to compare that sort of average number with specific cases where the number was higher or lower. We work on a lot of second homes and vacation homes. On some jobs, we're working on a house where the owners are going to be gone for weeks, leaving us alone to get the job done. On other jobs, the owners will be back every weekend, and they expect the place to be spotless when they arrive. Obviously, if we're leaving the house pristine every Friday, we're going to spend more labor hours cleaning up and moving our equipment out of sight than if we're allowed to leave a stack of drywall and spackle buckets in the living room.

By the same token, if I have to carry materials around to the back of the property by hand, it's going to use more hours than if I have easy access from the driveway. So when I'm doing a detailed estimate, naturally I'll adjust particular categories of work up or down to reflect the particular case.

In addition, having a general baseline of historic labor data to work from is a huge help to me when it comes to screening client calls and selling jobs. For us, as for a lot of people in the industry, the phone is ringing a lot these days, and it's important to efficiently qualify each lead to see if the caller is a serious prospect. If I have good ballpark numbers, I can say, "Your deck will probably cost X dollars," or "We can do a bathroom this size typically for about Y dollars." That way, I can find out quickly whether a customer's budget makes them a suitable client for us.

Kyle Diamond co-owns New Dimension Construction, in Millbrook, N.Y., with his father, Dale Diamond. Kristen Detheridge, office manager for New Dimension Construction, also contributed to this story.