



The Newsletter for Profit-minded Builders and Contractors

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Back to Basics: Speeding the Schedule

by Paul Sharp and Bill Watkins

Success in the building business requires controlling two factors: money and time.

While builders often have elaborate systems to control money – with estimating, job cost accounting, and purchase order systems, scheduling is often more hit and miss. At the beginning of the job a schedule is developed, and then adjusted as delays make havoc of the carefully wrought plans.

On the job site, time is money. Certain costs, such as construction financing interest and overhead, are tied to the time it takes to build the house. Other factors are less directly linked – for example a faster turnover time will increase income and productivity, and have a major impact on profitability.

Cycle or turnover time consists of two elements – lag time, or time between starts, and construction time, from groundbreaking to closing. You can reduce lag time through having homes pre-designed, pre-selected, and pre-approved for construction. You can reduce construction time by eliminating dead periods from the schedule, and by having multiple tasks completed simultaneously.

While reducing cycle

The faster the turnover (less time to build, less time between houses) the greater the profits. Part of this increase is due to increased volume, and part due to lower overhead per house.

time is usually a good thing, the goal is not to build a house as quickly as humanly possible. In demonstration projects, home builders associations have shown that it's possible to build a house from foundation to completion in 24 hours. Rushing the schedule, however, increases the likelihood of errors or shoddy workmanship. The goal is to build in a reasonable time, where subs can comfortably complete their work without unnecessary down time. Pushing the schedule too fast can also lead to unreasonable

a system, and that you use it consistently. There seem to be two approaches to managing the schedule – either a highly detailed, complex, and powerful CPM (Critical Path Management) system such as Microsoft Project, or a simple, calendar based manual system. While CPM systems are powerful tools for understanding how the different aspects of the job interact, they take time to set up and analyze. Their very power and complexity may make them overkill for the typical small builder.

Calendar approaches, on the other hand, are simple enough, but they lack any analytical tools. When a change occurs, you have to manually adjust all the subsequent dates. There are a few computer calendar programs, but they lack the ability to link all the events and reschedule automatically. What is needed is a simple system that uses the power and flexibility of the computer, but without the setup time of full-blown CPM systems.



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SAMPLE	Duration	Estimated Completion Date
ACTIVITY		
RELEASE DATE		04-Jan-05
Site Plan, Building Stakeout	4	10-Jan-05
Temporary Utilities	1	11-Jan-05
Order Public Utilities	1	12-Jan-05
Excavate Foundation	1	13-Jan-05
Footings & Found. Walls	3	18-Jan-05
Order Lumber & Windows	1	05-Jan-05
Siding -- Order Material	1	19-Jan-05
Waterproofing	2	20-Jan-05
Sewer/Water	3	25-Jan-05
Backfill Foundation	1	26-Jan-05
Slab-on-Grade	3	31-Jan-05
Lumber & Windows	1	01-Feb-05
Frame House	14	21-Feb-05
Measure for Cabinets	1	02-Feb-05
Pick up extra lumber	1	22-Feb-05
Install Fireplace	1	22-Feb-05
Rough HVAC	2	23-Feb-05
Rough Plumb	3	24-Feb-05
Roofer	3	24-Feb-05
Rough Electric	2	28-Feb-05
Install Public Utilities	1	01-Mar-05
Frame Inspection	1	01-Mar-05
Install Siding	8	08-Mar-05
Exterior Deck	2	10-Mar-05
Garage Doors	2	10-Mar-05
Gutters	1	09-Mar-05
Brick/Stone Install	3	11-Mar-05
Insulation	2	03-Mar-05
Drywall	10	17-Mar-05
Deliver Cabinets	1	18-Mar-05
Exterior Concrete	3	22-Mar-05
Trim Labor	9	30-Mar-05
Clean House	2	01-Apr-05
Trim Return	1	31-Mar-05
Interior Painting	4	07-Apr-05
Finish Grade	2	11-Apr-05
Landscaping	1	12-Apr-05
Sod	2	14-Apr-05
Finish Electric	2	11-Apr-05
Install Countertops	4	13-Apr-05
Hardwood Flooring Install	4	13-Apr-05
Finish Plumbing	3	18-Apr-05
Clean House	3	12-Apr-05
Carpet Install	4	18-Apr-05
Set Appliances	1	19-Apr-05

Ten ways to reduce recycle times

Reducing cycle time (the time it takes to start and complete a home) can have a significant impact on the bottom line. It increases productivity, and decreases applied overhead per house. Here are ten ways to reduce that time without driving yourself nuts.

1. Control the client

If this is a custom home, maintain a rigorous schedule for selections and approvals. Clients who can't make up their minds and then change their decision later can create havoc in the schedule. Make sure that decisions are due well before they are needed. Have a penalty for any client driven delay. If it's a production or spec house, make sure that the job never waits for *you* to make a decision.

2. Simplify construction

Houses with fewer complexities in the foundation or roof line are faster to build. If you can simplify construction without impacting curb appeal, you're miles (and days) ahead. Once you simplify the design, you can simplify your life even more by building the same house over again.

3. Streamline estimating

Have a straightforward estimating system with pre-priced costs. Use annual unit cost contracts with subs, and update materials costs regularly. If it's a home you've built before, or a modification of one, incremental estimating with updated costs should be easy.

4. Control the regulatory process

There's no reason to wait for building permits or inspections. Submit plans for pre-approval before you've finished your current construction, so that once you finish one house you're ready to go on the next. If you maintain a tight schedule you can call ahead a few days for inspections. And if you insist on making sure all items are completed before the inspector arrives, you can avoid repeat inspections.

5. Create cooperation between subs

If you only use subs with whom you have a good working relationship and a reliable track record, the job will go much smoother. At the beginning of the job, coordinate the work between the subs so that there is little downtime, and the work of one does not interfere with another.

6. Have a backup plan

In any schedule, things can go wrong. Subs will get sick, tasks will need to be redone, orders will arrive incomplete. When that happens, you need to think proactively. Shift another sub in ahead if possible, or have a backup sub from another job.

7. Pre-order materials

If you know what's needed ahead of time, order it to arrive early. If it's a tricky order, check it at the dealer to ensure it's correct and complete, and then have it shipped on site when needed. Standard orders should arrive in time to reorder if necessary.

8. Use standardized selections

You'll have less waiting for materials if you order items that are typically in-stock. You may want to limit window sizes to three or four different configurations, and use standard plumbing and lighting fixtures.

9. Use parallel scheduling

It's possible for several contractors to be working on site at the same time, as long as they aren't working in the same area or getting in each other's way. Typically, schedules are arranged sequentially with one task being completed before another begins. You can save time by doing non-linked tasks simultaneously.

10. Maintain the schedule

It's not important what scheduling program you use – only that you use one. A simple program is easier to maintain and update than a complicated one, and thus more likely to be implemented. If you find that you lose a day, try to make it up later.

Ask Al by Al Trellis

Building to a Budget

Q: A very nice couple recently brought a set of plans to my office and discussed what they wanted in their new house. By the time they had listed everything, the price had climbed to \$795,000, while their budget was under \$700,000. What can I do to make their dreams a reality?

– Hopeful in Minnesota

A: Prospective home buyers are experts in what they want, but they rarely have an in-depth knowledge in what things cost, and how they contribute to the value of their home. That's *your* expertise. You know as well as I do that the difference in cost between Moen and Grohe faucets is significant, and yet in terms of function and even aesthetics, the difference can be minor. Using cultured stone instead of fieldstone, using fiber cement siding instead of cedar, and choosing slightly less expensive lines of cabinets, appliances, and flooring can make a huge difference in the ultimate cost. Slate tiles, copper flashing and hidden gutters make a real statement as to quality, but they can push the cost of the house through the roof.

It's all a matter of priorities. What is more important to them – the Gaggenau dishwasher, the Wolfe range and the SubZero refrigerator, or the imported Italian marble and hand-painted tiles? It's your job to steer them through that maze of choices, and select the ones that are most important to them and that fit within their budget.

Of course, some buyers are unwilling to compromise, and their dreams will always be bigger than their pocketbooks. It's always better to recognize early that these clients suffer from unrealistic expectations, and that you will be better off not having to deal with their unreasonable demands and continual dissatisfaction.

A Pattern Language by Paul Sharp Couple's Realm

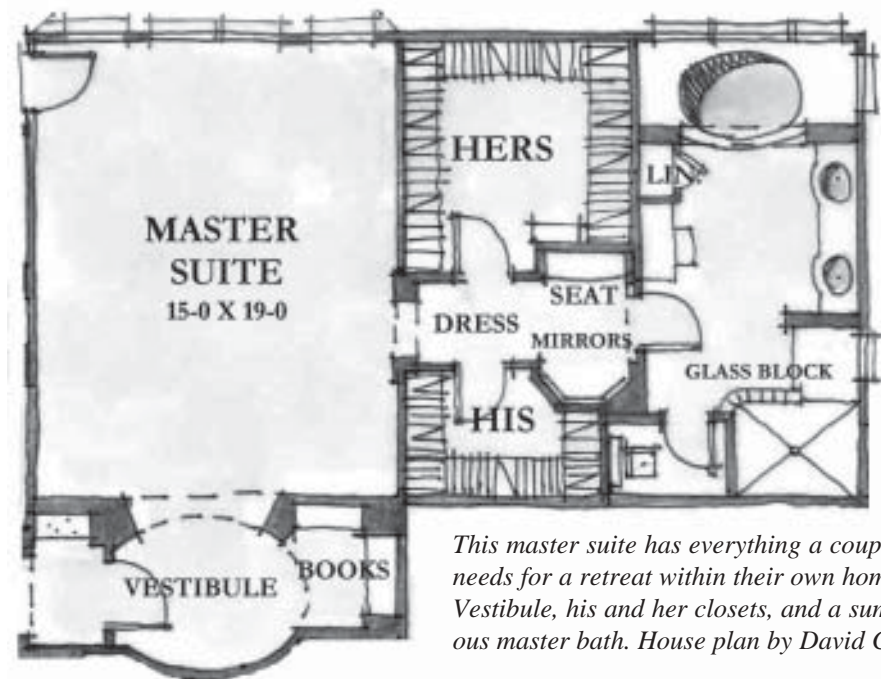
Christopher Alexander wrote *A Pattern Language*, outlining over 250 rules of thumb that affect home design. In this series of articles, we've highlighted some of our favorite patterns.

136. Couple's Realm

"The presence of children in a family often destroys the closeness and the special privacy which a man and wife need together. Therefore: Make a special part of the house distinct from the common areas

and all the children's rooms, where the man and woman of the house can be together in private. Give this place a quick path to the children's rooms, but, at all costs, make it a distinctly separate realm."

Plans with the master bedroom on the main level, and other bedrooms on the second floor accentuate this couple's realm by providing greater separation between the master suite and the Children's realm.



This master suite has everything a couple needs for a retreat within their own home. Vestibule, his and her closets, and a sumptuous master bath. House plan by David Court.

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Quote of the Month

"Time is the scarcest resource and unless it is managed nothing else can be managed."

– Peter F. Drucker

IN NEXT MONTH'S ISSUE

Back to Basics: Manage the Money

A company can be making a profit and still go bankrupt if they're not managing their cash flow. The time to arrange financing is *before* you need it.