



Plumb Line



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PROGRESS SO FAR

WHAT'S NEXT?

Metal Maze

Concrete walls and ceilings look simple from the outside, and one might be tempted to think, "Oh, well -- I guess you just build a wooden form and pour it full of concrete. What's so hard about that?" That's true in part, but that's only part of the story. Before you can pour, you have to carefully position hundreds of feet of steel reinforcing rods so that they will be imbedded within the concrete. Concrete is extremely strong when a load tries to compress it, but not as strong when the load tries to pull it apart. Steel, however, is the other way -- it doesn't have a lot of strength under compression loads, but it's marvelously strong when the load is pulling on it. So, concrete walls and ceilings have a tightly woven grid of reinforcing steel rods inside them. That way, the finished product has a lot of compressive strength from the concrete and a lot of tensile (pulling) strength from the steel. It's a lot more complicated than it looks! Within the basement ceiling and beams, the reinforcing rods are spaced so closely that you can barely wiggle a boot between them to find a place to stand. The process of preparing the reinforcing steel has been slow, painstaking work, but it will all pay off when we have a sturdy basement ceiling.

Lafayette Caverns?

While the construction crews work on top of the form for the basement ceiling, they are supported by a tightly packed forest of supports down in the basement. It's a strange place down there -- cool, quiet, and almost completely dark. Overhead, two layers of thick plywood cover the whole basement, held up by a zillion 2x4 boards spaced a couple of feet apart. At first, it seems as if you're walking through a house that's under construction; then, you realize that there are no walls and doorways, just an endless succession of boards sticking straight up to the ceiling. As you listen to your footsteps echoing around in the dark, it's hard to imagine what the place will look like when it's lit up and full of humming machinery.

What's YOUR Ring Size?

You may think you wear a big ring, but let me tell you -- we've got you beat, no matter HOW big your fingers are. Boulder Steel in Broomfield is designing and building a steel 'compression ring' that will go clear around the building! The compression ring will sit on top of the main support columns, holding them in place under the weight of the roof. Since there is no center column, the roof has to be supported from the edges -- without the compression ring to hold things together, the roof would try to flatten out and shove the walls outward. This is no dainty little 'friendship ring,' believe me! Draftsmen, architects, and engineers have been calculating loads and stresses for quite a while, checking and rechecking their designs to make sure the ring can handle the loads that will be placed on it. (If you think it was tough to pick out a ring for your sweetie, you should see the amount of worry that's gone into THIS ring!) The compression ring should be ready sometime during the week of August 12, and then we'll be in the final stages of preparation for raising the support columns and roof beams. (No, I don't think this particular ring will be delivered in a velvet box, by the way...)

Down The Tubes!

Way back when the basement hole was dug, we found something unexpected at the bottom of the hole. No, it wasn't buried treasure... it was WATER! Those who have paid a fortune for deep wells might be envious to learn that we struck water in the basement, but we weren't too thrilled. Apparently, there is a steady flow of water across the property -- after a lot of head-scratching and calculation, we decided to put in two sump pumps and a complicated set of outside drains to keep the water out of the basement. The water problem caused a lot of concern initially, but now it looks like the outside drain system is working so well that the sump pumps may never be needed! "Away go troubles, down the drain..."

It's A Dirty Job, But...

Now that the fill dirt has been packed in place inside the foundation walls, work has begun on underground sewer lines and such. Last Wednesday, workers were busily assembling pipes and fittings, preparing for the pouring of the concrete pad under the building. They checked themselves every few feet with levels and measurements, making sure the pipes were positioned correctly. Mistakes are easy to correct now, but after the pad is poured those pipes will be literally 'cast in stone.'

Top Hat

If you've looked at the plans closely, you may have noticed that the peak of the sanctuary roof has a 'hat' on top! "Well," you say, "that's cute; I guess it beats having just a plain old peak on the roof." There's more to the 'hat' than good looks, however -- it is really the main fresh air intake for the building! The 'brim' will actually be covering a series of vents that are connected to the fresh air intake down in the basement. How's that for a clever design? Hats off to the architects, folks...

Guess What's Next...

The engineers designed the basement ceiling and beams.

The construction teams built the forms and tied the steel.

The cement trucks poured the forms full of cement.

The wet cement hardened into concrete.

Now what?

I'm glad you asked... Step right this way... See all that lumber in the basement? It's got to come out! Moreover, it can't come out the way it went in, because there's a huge concrete slab covering the basement! All nine million boards and three acres of plywood forms have to be taken loose, carried to the basement stairwell, and hauled up out of the hole! Sounds like a job for a horde of volunteers...

*** Gold Stars ***

Yes, it's time once again to present the spectacular Plumb Line "Gold Star Award" for service above and beyond the Call of Duty:

Ada Imel, Luke Imel, Danette Imel, Josh Wood, Adrian Niemec, Cheryl Williams, and Kristen Eitelbach spent several days cleaning up the construction site and moving lumber. Bravo!

Who else needs a Gold Star? Let me know! This whole project is filled with hard-working people; the least we can do is give them a Gold Star. Who knows -- a Plumb

Line "Gold Star Award" may be worth a fortune someday!

Question and Answer

Q. Where does the water go when it drains out of the basement hole?

A. The basement drains are connected to a long pipe buried deep in the ground that dumps the water into the creek. Burying that pipe was a tough job!

Working Hours

The work schedule varies with the weather, occasional hold-ups experienced while waiting for material, and other reasons, but here are some general guidelines:

* Work is normally done from about 8 A.M. to about 2 P.M. on weekdays, and most Saturdays.

* Work continues on most weekday evenings, starting in the mid to late afternoon after things cool off.

For specific dates and times, ask around -- DeeDee Minne is helping Pastor Bill coordinate the volunteer effort, and you can also grab someone on the construction team to find out about day-to-day operations on the site. Once we get out of this phase of construction, the work will get easier to forecast and schedule, and we hope to provide more detailed information here in **Plumb Line** to help you find dates and times to help out.

Back Talk!

Got a question? Want to make an announcement? Want to recognize someone for a job well done? Get it in the paper! The **Plumb Line** is here for construction news, announcements, and project updates. Help us make this paper better and more useful; get in touch with me.

Philippe Nave 469-8327 (home) 538-3150 (work)

(or e-mail me at pnave@lucent.com at work!)

Contact Information

Here are some names and numbers you may need for project information and coordination:

DeeDee Minne 665-0382

Volunteer coordination (construction, child care, etc.)

Dorothy Sorenson 469-4905

Coordination of meals and work breaks