My wife Dorothee and I have been talking about a wood-fired pizza oven at our home on the outskirts of Austin for at least 5 years. We knew we wanted one, but just couldn’t decide on a location. Our backyard covered patio is elevated above the ground, with wooden decking, and I just couldn’t see that as being an appropriate place for a couple of tons of concrete and brick. And, although we are situated on over two acres, the remainder of the space immediately behind our house has already been relegated to other landscaping ideas:

Finally, the perfect spot presented itself. We decided to build the oven into the hillside and limestone retaining wall located just a few yards from our patio:
After much consideration, we chose the Cortile Barile style of oven. We liked the idea that the final stucco coating would blend more readily with our limestone wall than bricks. And, honestly, using the Styrofoam forms to cast the oven just looked easier than laying individual bricks for the oven itself.

With assistance from our cheerful helper Alex, we began excavating through the mostly-solid rock of the hillside behind the house:
Finally, the finished opening was completed, and all the rocks were removed.
Then with Alex’s assistance, we mixed the ‘castable refractory’ masonry to pour the individual pieces for the oven itself, adding the steel particles for strengthening as instructed. I do want to emphasize that it is really important to spend a lot of time poking the mortar mix after pouring into the form, to eliminate any air bubbles.

This casting process turned out to be one of the more labor intensive tasks in the project. Removing the styrofoam form from the side pieces was particularly laborous, and had to be done with gloves to avoid the numerous exposed (and sharp) pieces of stainless steel fibers. Once all the forming material is removed from the oven pieces, it is necessary to inspect all surfaces and cut the sharp edges of steel ‘fibers’ sticking out from the pieces.

Ours came out really well. Spoiler alert.. you will NOT be re-using these forms, and it does make a huge mess of styrofoam particles everywhere!:
The next step involved constructing a form to pour the concrete support base for the oven. We wanted the base to cantilever out from the wall to provide a little work space in front, so I constructed a wooden structure to support the extended part of the base. And, of course, rebar steel was used internally as directed to provide extra strength for the slab. (Sorry, we neglected to take photos of the forming structure).

A rectangular indentation has to be formed in the center of the base for later pouring of vermiculite/mortar mix in the center to insulate the fire box. We accomplished this by filling the form with concrete just up to the thickness of the supplied foam board from the top. Then we placed the foam board in the center, resting on the newly poured concrete, then completed filling the form all the way to the top. I DID spray the foam board with SPAM to make it a little easier to remove once dry.

Once the slab is completed, then the foam board can be removed from the center, and the vermiculite/mortar can be poured to fill the center.

This photo shows the concrete base in place, cantilevered out from the wall.

The next step, pictured on the following page, was to lay the bricks for the oven base, on top of the slab. You can see that the brick base overlaps the vermiculate/mortar insulating center.
Once the brick is in place, it is time to fill the inner perimeter with sand, just to the level to put the firebricks in place in the center. We decided to pre-cut all the firebricks before adding the sand sub-base. To do this, I cut a piece of plywood to just fit inside the opening, then we supported it underneath with bricks. This gave us a working surface with the firebricks protruding above the edge of the perimeter bricks, to allow for easy removal as we cut and adjusted the edge bricks.
I do highly recommend renting a 14" diamond blade masonry saw to cut the bricks. It will make short work of the job, and give good clean cuts. It was well worth the additional expense.

Once all the perimeter bricks were cut and fit, the entire plywood base was lifted out, with bricks on top, and set aside for adding the sand sub-base.

We filled the firebox opening with sand about ¼" higher than the thickness of the firebrick, using a screed board I made up with extended supports to ride along the top of the brick perimeter, and to level the sand to the correct depth. My thoughts were that it would be easier to tap the bricks down a bit to be level, rather than have to add additional sand underneath if a brick was too low. And that worked out well, as we got to the last few bricks, it was easy to remove the small amount of excess sand before placing the last bricks.

Finally! With the firebricks in place, it was time to set the actual oven pieces in place, and mortar them together, using the high temperature mortar.
We used left-over firebricks to weight down the stainless flue until the hi-temp silicone set up.

The next step was cutting the insulating ceramic blanket for the oven. I found that a straight razor blade worked well for cutting the material. Don't waste ANY of the blanket, as there is just barely enough in the roll to complete the task:
I was concerned about how the blankets would lay on the oven unattached. I did use a bit of the left over hi-temp silicone to help hold the blankets in place, and then added a few bricks to help hold everything in place, but the blankets are heavy enough to support themselves in place fairly well:
Once the ceramic blankets were in place, it was time to cover the entire structure with the chicken wire. It is best to purchase a 48” wide roll of wire so that a single piece can span the entire depth of the oven. I began on the sides, running one single piece all the way across the top, and leaving about 3” of wire at the bottom of each side, just as a way to hold it in place with bricks. I also cut the width of the wire to extend past the oven edge about 2” on each end, and then bent that wire inward to hold the end pieces of insulation in place.

After the first layer of stucco was put in place, I would then snip off the extraneous chicken wire along the bottom edge of the oven.
Then we cut pieces of chicken wire for each end, again leaving 2-3” excess around the outer edge to bend over the existing wire. Of course, it is necessary to cut slits in the bent portion to make it fit properly.

I found that it was not necessary to use separate pieces of “tie wire” to secure the end pieces of chicken wire to the central piece. It was sufficient to just use the ends of the chicken wire itself, wrapping them around the joining piece, to form a single structure.

And, yes, this process really is much easier than one might imagine!

![Image of chicken wire structure]

Now, for the fun part, troweling the stucco layers onto the outside of the oven. This was the segment that I had been dreading, as I had never had experience with stucco before, and imagined a huge unworkable mess. But, I was pleasantly surprised to find that the stucco masonry is very easy to work with. It has little fibers in it to help hold the “mud” together, and the mix itself stays wet and pliable much longer than bricklaying mortar does. The chicken wire helps hold the mortar to the structure, and the whole process goes pretty quickly.

I do recommend the following tools to make the job easier: A mortar board to hold the mortar while working (This is really much more critical than one might imagine, as it would be very cumbersome to try to get a trowel-full of stucco from a bucket or tray).

Additionally, I purchased both a plastic trowel, which I used to apply the first or “scratch” coat, and a metal trowel for the second finish coat.

Finally, a mortar scratching tool is essential on the first coat, to create ridges in the coat to help hold the second coat better. All the tools are pictured on the following page.
The first ‘scratch’ coat of stucco is completed
Then the final stucco coat is applied. I used the metal trowel for this application to get a smoother finish.

The hardest time was after the stucco was applied, because we were so eager to fire up the oven, but were advised that it would be best to get the stucco painted first, since any smoke deposits from a fire might inhibit the paint’s adherence.

We decided on using Behr Elastomeric Masonry/Stucco paint (available from Home Depot). The painting instructions called for allowing the stucco to dry and cure for 30 days, which was like a prison sentence for us! Finally, when the allotted time was up, I went to purchase the paint, only to find that few stores actually carry this special paint in stock, so we had to wait an additional week for order and delivery!
At long last, the two coats of elastomeric paint were applied. This coating has a stretchable, almost rubbery composure, and is warranted for 20 years by the manufacturer. We’ll see if that includes Texas summers!

The oven looks good. The only remaining task now is re-mortaring the stone wall.
Finally! After 9 long months, our pizza oven is finished. Before recreating the stone wall around the edges of the oven, I added drain pipes at each lower corner. Additionally, I embedded low voltage LED light fixtures in the wall to provide some light for those night time pizza parties.

During this 9 month gestation period, we have had lots of time to research and explore other oven options (just to make sure we shouldn’t be suffering from post-purchase blues). I am absolutely convinced that these plans, and this oven is one of the best available. It took a lot of work, but now we can enjoy the fruits of our labor. Bring on the beer!