



The Burton Gate, so called because it looks like it belongs in a Tim Burton movie, is a double leaf gate hanging at the end of a client's driveway that leads to the backyard of their property. The fabricator used AutoCAD for the framework and major elements and then printed the design full scale and hand drew the rest of the flowing elements. To add interest to the framework and elements, 10-15 different textures were used.

Job Profiles

Experimenting with design and texture

- Anderson Welding & Sons won a Gold Award for their Burton Gate in the 2010 Top Job Contest.

For your information

Lessons learned

- Sometimes AutoCAD isn't enough and hand drawing is necessary to get a design the way you want it.
- When it's a free form design with nothing set in stone, having two artist/blacksmiths working on the same project isn't the best idea.
- Embracing the negative, like rust, is sometimes the best way to manage it.

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By Rob Anderson

Nicknamed the "Burton gate" by one of our staff, because it looks like it belongs in a Tim Burton movie, we had a lot of creative freedom with this project. In the beginning of the design process we realized AutoCAD was not going to be the best design tool for all the elements in this gate. So we ended up doing a lot of free forming.

Design

Getting the customers excited

We had a lot of creative freedom on this project. We had done a few projects for this customer in the past. When going through some design books and photos with them I noticed most of the designs they were leaning toward were of an art nouveau style. After this initial meeting we provided the customers with three rough ideas and budgetary numbers. The hom-

owners were going back and forth between two of the designs we had supplied. Knowing which gate we wanted to make, I explained at a second meeting the theme and my vision of my preferred gate design to them. I knew if we could get them excited about it we had a good chance of building it.

The theme of the gate was an early morning wetlands with elements replicating fog, water, flowers, leaning trees, climbing vines, and some local critters. After some time I guess my excitement for the design rubbed off on the both of them, and we were off. We couldn't wait to get started.

Although this would be a very different and challenging project, we were up for it thanks in large part to all the knowledge gained through NOMMA and all its resources the past few years.

The gate was to be a double leaf gate at the end of a driveway leading to the backyard of the property.

Double leaf was chosen to allow larger equipment and mowers into the fenced property. Beyond the kept lawn of the property was an un-kept wooded marsh area. Although it wasn't exactly a wetland, I thought it would be a complementary back drop for the gate.

When we started designing the gate in AutoCAD I drew the columns and the frame work of the gate with a couple of the major design elements. I then printed the design on letter size sheets and started hand sketching all the elements, until I came up with a design I was happy with. I went back to AutoCAD and drew in some of the changes. I was not able to get the exact look in AutoCAD. So we printed the gates full size and hand drew the rest of the elements.

Fabrication

Experimenting with texture

Once the design was finalized we started edge hammering 1-inch square bar to be used as the main frame of the gate and also for the columns. We then came up with about 10 different textures we wanted to use on the main infill elements. The infill was all $\frac{3}{4}$ inch wide by $\frac{1}{4}$ - $\frac{1}{2}$ inch thick. We marked what textures we wanted on each bar. Even if at the time we were not sure where exactly it would end up in the design.

After the texturing was finished we free formed all the bars to match our drawings. We had mounted the drawing on a piece of plywood so we could easily move it around the shop, as needed for the different steps in the design.

When we had the frame work complete we set the gate frame up right next to our drawing on the table. This would allow us to form each piece and then fit it or eyeball it in place. Keeping the gate upright also allowed us to weave bars in and out to create depth and give life to all the elements.

Up until this point things were going very smoothly. As we started forging the element ends or finials we started running into a small problem, between me and one of our fabricators. It's a problem I guess a lot of artist/blacksmiths run across. That is it's hard to have two smiths working on one

project. Especially when it's a free form design with nothing set in stone. We both had visions of what each finished element should look like. Unfortunately our visions were sometimes very different. Needless to say we ended up with a good pile of "experimental" rail ends. Looking back I think this definitely made for a better finished piece.

One of the last elements to this gate was the bottom panels. These were to have the look of a bat wing or spider web (depending on who you ask). We wanted to use copper sheet sandwiched between the steel skeletal panels. After some experimenting we settled on $\frac{1}{4}$ inch, quarter round for the steel frame. We then forged $\frac{1}{2}$ -inch round bar into $\frac{1}{2}$ -inch, half round with the extra ma-


terial forming an un-uniform bottom edge on both sides of the half round. This was a small detail in the gate but added to the natural feel and probably my favorite part of the entire gate.

We started playing with different textures for the copper sheet. I remember trying samples which included hammering over rough textured concrete, hand hammering with a carpet backer, and hammering over different size stone. The texture we decided on was created by using a rubber mallet and hammering over the square holes in our platen table. This gave us a kind of scaled look and worked great.

We mounted the columns on a 10 inch I-Beam with bolt connections. This was done in case the gate ever had

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Framework and finish. The bottom panel is hammered copper sandwiched between round bar that was forged to an un-uniform 1/2 round to give a wing or web feel. The whole gate is mounted on an I-Beam that runs column to column. Finish is natural. Approx. labor time: 120 hrs.

to be removed. It also allowed us to put the whole gate together in the shop, making for easy final shop assembly and final touches.

Finish **Embracing the rust**

With the finish, we knew from the beginning we did not want to cover all the texturing with a colored liquid

paint or powder. We also knew with a lot of the elements stacked tight together we were going to have rust issues.

What we decided to do was embrace the rust, so when we finished the gate it went outside for about a week.

With the help of a few good rain showers, at the end of that week we had a real rust patina with no chemi-

icals or darkeners. We were all surprised with all the shades of color we were seeing from the sanded joints to the natural scale left from forging. From that point we clear coated the entire gate which seemed to make all the colors blend together. We then waxed the gate with the home owners understanding that this would need to be done yearly.

Final steps **Reflecting on a job well done**


The installation of the gate was pretty easy. Two men dug the holes for the footings and trenched out between them for the I-beam. We dropped the I-beam in place bolted up the columns and poured the concrete. About a week later we hung the gates and all was good.

It's very few projects you get to do exactly what you want; on this project we did. We are very proud of this project and want to thank all of our fellow metalworkers who voted for it.


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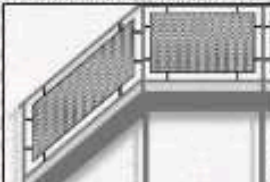
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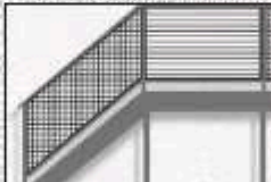
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