

Minneapolis Manhole Covers - by Kate Burke

The Minneapolis Manhole Covers were installed in 1992 before personal computers, digital cameras and ink jet printers. In order to share the initial sketches, memories, and relevant material of the project, I have had to find them after several moves, and to photograph them, and to make them presentable. This has taken time.

Project Description

"HAIL MINNESOTA", 1992

75 Cast Iron Manhole covers installed on Nicollet Mall, Minneapolis, MN

Architects: BRW Architects

Foundry: Le Baron Foundry, Brockton, MA

"Hail Minnesota"

THE PROJECT

In the late 1980's a major redevelopment of Nicollet Mall in downtown Minneapolis, MN was underway. BRW Architects in concert with the City of Minneapolis "Implementation Board" designed and implemented the project. It extended over 13 city blocks and included a new street design, paving, street furniture, planters, bus shelters, and artwork. They had 7 targeted locations for the inclusion of artwork, and they knew the basic format of what art they wanted, for instance, a water fountain, street furniture, bus shelter, and a pavement embedment were to be included.

Their approach to including artwork in the project was to invite 800 artists gathered from a national pool of art commissions to submit examples of their art. From this they choose a handful of artists to specifically design for each location, about 5 artists for each spot. They would make their final decision from these designs. Having experience with paving inserts and casting in metals, I assumed I would be competing for the embedment design.

After my interview, I was surprised to be asked to design manhole covers, as they were not a part of the originally proposed art projects. Upon learning that Craig Amundson from BRW had overseen an art project in the 1970's of bronze manhole covers (which are still located in a cultural district close to Nicollet Mall), I saw that manhole cover designs were a perfect part of his creative vision.

An important lesson in working in public art is that you are always doing the unexpected. A project rarely comes along the same way twice, so you are required to figure out how to get things done, which is my specialty. I was delighted by the challenge!

Craig Amundson and I worked together to hone in on the concepts that would be appropriate for



Minneapolis and Minnesota to use for the manhole cover designs. I like natural themes and created a design with a walleye that we both liked. With the walleye being the state fish, I was inspired to continue the thought using the state bird (the loon), the state flower (the lady slipper), and even titled the project with the state motto, ("Hail Minnesota", I am delighted to think how that came to be!). I also added the major grains of the Midwest because of their importance to the history of Minneapolis.

As there were 75 manhole covers located on the sidewalks of Nicollet Mall to be replaced, we chose 11 designs and cast each one 10 times. In the end I also cast an additional 30 covers for Northern States Power Company (NSP), using the same designs. They are easily identifiable, having a larger rim than the other covers.

Below are some of the earliest drawings for the original proposal. For projects of this size and location, there are many people who are interested in the proposals. There were 7 different committees and over 140 copies of the proposal were distributed. My proposal distinguished itself from the others as being the only one that had no objections raised either for concept or design. The original 11 images from the proposal are:

1. Walleye



2. Loon



3. Lady Slipper



4. Norway Pine



5. Wild Rice



6. Wheat



7. Timberwolf



8. Northern Pike



9. Corn



10. Oats



11. Halverson Apples



It is important to get a project completed on time and in budget, so the approval time can cut into the execution time. So once the designs were approved and the project was in motion, a year had passed, and there was only another year to hand carve 11 “patterns”, find a foundry that would work with me, and learn the litigation and engineering requirements for the covers. For instance, a manhole cover is required to not trip a lady wearing stiletto shoes and it has to hold the weight of a fire truck. With all of that being considered, the end result should also be a good art project that the community would enjoy.

PROCESS

The process for making the patterns began to unfold as each requirement defined a part. I needed the pattern to be flat for a good footfall. I needed the detail to be no more that ½ inch deep and I needed to carve by hand. I started with a dense chip board which served all of those needs. With several sheets of thin chip board, I was able to have three, four, or five layers of board as necessary for various designs, and create intricate detail. And very importantly (due to liability), I could guarantee the surface would be flat once I glued them altogether.



1.



2.



1. I starting with lots of razor blades (I went through many hundreds of blades). 2. I transferred my drawings to layers of board with a knife. 3. I peeled away the layers. 4. I glued and sealed the pieces.



3.



4.



The absorbency of the paper let strong glues and foundry varnishes to sink in and harden. It was a unique solution and many seasoned pattern makers have said they have never seen anything like it. This process has worked so well, that I have cast from each pattern 10 to 20 times. Even now, the patterns are in great condition and are very beautiful.



Once the patterns are completed they need to be sand cast in metal. There are several processes for casting, with sand casting being the most basic. Using the pattern, one makes an impression in sand and then fills the cavity with molten metal. The process is somewhat reminiscent of printmaking. Everything is a shifting of positive and negative images. You carve in the positive, in the sand it becomes a cavity or the “negative”, you pour molten metal and it hardens in the cavity, then it comes out positive.



The pattern



The iron casting

THE FOUNDRY

At the time, I was living in Massachusetts and was fortunate to find a foundry nearby in Brockton MA, --- LeBaron Foundry. It was a small iron works that specialized in manhole covers. My experience with foundries has been very rewarding. The men are very skilled, very helpful, and delighted to have something out of the ordinary to work on. Unfortunately the foundry was too small to avoid being bought up at the turn of the century along with dozens of other iron works. They were all consolidated into one or two large foundry works in the US. With few independent foundries currently in business, the project would be more complicated and costly to get the castings done today.

The Walleye was the first pattern I finished carving. Because I made the pattern in an untried process, I needed a test casting. The day they did the first casting, I arrived early and was excited to see the results. They had just cast the Walleye and put it into the “wheel-a-rama”, a sand blasting booth. The booth is a big metal box up off the floor with a rotating wheel inside. The casting is put on the wheel, the door is closed and in the darkness it is blasted with sand. The foreman and I slogged our way through 6 inches of sandy dirt to the “wheel-a-rama”. He opened the large door and through the darkened space emerged the Walleye glowing red in the center. It was awesome and a moment that I will never forget.



Cast iron looks like almost like aluminum when it is first cast. You can see the color on the lower left casting. It then gets a dusty iron fur which can be soluble in water. To protect the new expensive pavers in Minneapolis, we let the castings “settle” at the foundry before sending them to MN.



Once the castings were installed, it took years for the surface patinae to polish. There were years where every time I went to visit the covers, another building had been demolished. The cement dust would settle into the details and make for a pleasant contrast



It is recently that photos reflect the beautiful polish of well worn cast iron



One of the most touching stories of the installed manhole covers, was the bus tour that included time to take rubbings of the covers. As one person would hold down the paper while another would take a rubbing.



Rubbing detail - Halverson Apples pattern



Rubbing detail - Norway Pine pattern



LOON –Rubbing



WILD RICE- Rubbing

Today the Nicollet Mall is undergoing a new redevelopment designed by James Corner. After an extensive assessment, it is very gratifying that the people of Minneapolis voted to retain the manhole covers in this upcoming renewal.

Perhaps one of the most satisfying sentiments about the manhole covers is from an article in the 07/10/13 MinnPost article by Andy Sturdevant, “**Minneapolis' sense of itself revealed in artist-designed manhole covers**”

[HTTP://WWW.MINNPOST.COM/STROLL/2013/07/MINNEAPOLIS-SENSE-ITSELF-REVEALED-ARTIST-DESIGNED-MANHOLE-COVERS](http://www.minnpost.com/stroll/2013/07/minneapolis-sense-itself-revealed-artist-designed-manhole-covers)

Recently the manhole covers have been included in a couple of blogs:

Michelle Ward

<http://michelleward.typepad.com/michelleward/2016/10/commissioned-covers.html>

Will Crain-photos and Michelle Ward- graphics.

Louise Levergneux

<http://louiselevergneux.com/half-measure-studio/2016/11/13/7c5rm3ny9dlqmezn1561bt4193oe8>

<http://louiselevergneux.com/half-measure-studio/2016/11/21/walleye>

Presentation Pictures of some of the castings of “Hail Minnesota”



LOON

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TIMBERWOLF

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HALVERSON APPLES

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WALLEYE

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