

DEBORAH UHL: PAINTING CONSERVATOR

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PAINTING TREATMENT REPORT

10-05-11

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OWNER/AGENT

City of Fort Collins

DATES TREATED

September 12-30, 2011

TREATED BY

Deborah Uhl and Lisa Capano

DATE OF REPORT

October 5, 2011

ARTIST/MAKER (Owner Attribution)

Don Brown

SIGNATURE and its LOCATION

Brown Sign Co. Lower left historically but has flaked off mostly

TITLE (""") or DESCRIPTION

Coca -Cola And Angell's Delicatessen Privilege Ghost Sign

DATE

1958

STRUCTURE

Oil paint on exterior brick wall

DIMENSIONS (H x W x D)

Coke: 21' x 10', Angell's: 31' x 3'8"

ACCESSORIES

n.a.

LEGENDS/LABELS

n.a.

OTHER DISTINGUISHING MARKS

n.a.

Coca Cola Sign Rehabilitation Project #2009-M2-007

Field Work Treatment Report September 2011



All conservation documentation should be retained with the artifact as part of its historical record. Documentation which the conservator provides complies with the principles set forth in the *Code of Ethics and Guidelines for Practice* of the American Institute for Conservation.



Before and After Conservation Treatment



CONSERVATION TREATMENT

The field work for this project was proceeded by three months of testing. Paint analysis, material testing, consultations, and meetings resulted in this successful rehabilitation project to preserve the Angell's Delicatessen and the Coca-Cola sign in Old Town Square in downtown Fort Collins. This report details the work and the insights gained during the field work. The photographs before, during, and after treatment of the signs can be found on the archival CDs attached with this report. A digital copy of this report and preliminary reports are included on the During Treatment CD. The background information on the materials used and the condition of the wall before treatment have been described in the treatment proposal dated July 25, 2011 and the addendum from August 18, 2011 also found on the During treatment CD.



The consolidant chosen for the project is labeled AVA second from the right edge

Testing of potential materials and methods took place on July 25, 2011 with a follow up site visit on August 24, 2011. Conservators Deborah Uhl and Lisa Capano created test areas on the lower wall of the ghost sign. Testing addressed the solubility parameters, effectiveness of cleaning, and consolidation of the differently pigmented paints and of the brick substrate. The consolidants were also tested on a test brick that was placed outside facing east throughout July and August. Our tests showed that the Avalure AC-315 was the most successful at saturating the different pigments, consolidating the paint and the masonry, and only slightly visually darkening the overall appearance of the sign. Avalure AC-315 had all the

characteristics called for in this project. It is non-yellowing, stable to both temperature changes and to UV rays from the sun, and allows the wall to breathe while not allowing water vapor to saturate it. Avalure has been through accelerated aging tests that have determined that it is sound and stable for 40 years out in the environment. The Avalure was dissolved in denatured alcohol and then benzyl alcohol was added to slow down the evaporation rate and increase the penetration of the solution into the paint and the masonry substrate. Tinuvin 292 was also added to the consolidating solution to protect the original pigments from damaging ultraviolet rays from the sun. Scientific studies have proven that the addition of Tinuvin 292 slows down the aging processes of both natural and synthetic resins and the fading of pigments.



Test areas along black left edge. Avalure was used in the lower three bricks below the gray

Cleaning tests were performed along with consolidant tests. The fragile paint was too friable to be cleaned off with anything other than a soft bristle brush and a nose aspirator to blow out loose particles behind the flaking paint. Only the soot covered area in the upper right was cleaned more aggressively. A dry cleaning sponge was used in this area to reduce the soot. Most of the soot was not removable due to its penetration into the masonry substrate.



Cleaning soot using a neoprene sponge in the upper right corner of the Deli sign

The treatment was conducted from the top right down to the lower scaffold levels. Observing the sign up close provided new insight into the creation of these two sign as well as the signs that preceded it. Along the Angell's Delicatessen sign there were numerous metal tacks in the mortar that had been painted over with each successive sign. Many tacks were strung in a row while others were haphazardly placed. The tacks had 3/8" wide heads and were 1/2" long. They certainly did not perform a structural role. There were too many to count throughout the two signs. My assumption would be that before the painted signs, banners were attached to the wall with tacks. We also found longer nails, two of which had rope wound around them. These short 2" sections of rope were also painted over by a number of layers of paint. Many of the tacks were not well attached to the wall despite being painted over.



Painted tack heads protrude through and remaining rope is visible on the far left

Another interesting insight into the sign painter's process was the layering of paint over flaking paint. Both signs had original paint that was painted over numerous paint layers as deep as $\frac{1}{4}$ " in many places. Then this 1958 paint was painted right onto the brick in other areas. It seems that the sign painters did little preparatory work to the wall before they began painting a new sign on top. This also gives evidence that the paint did not start flaking off this wall in the past 30 years but that it has been flaking off the wall for at least 60 years if not longer.



The historic paint was thinly applied over layers of old paint or directly on exposed brick

The 27 layers of paint found during our paint analysis along with the remnants remaining on the wall reveal that at least 4 signs were painted on this section of this wall. As oil paint ages on exterior walls, it can degrade and fall off like the red paint did on this sign. The oil paint that remains becomes more transparent over time which allows the viewer to see the underlying paint layers. In the Deli sign, the white paint is more visible beneath the green paint. Don Brown first painted a white rectangular box to contain the lettering. Then he painted the dark green and cut in the lettering. Essentially he created the letters by painting in the negative space rather than painting letters! In the Coke sign, the red has completely degraded into powdered pigment that has been washed away in the rain. Beneath the red, we are able to see how the sign was outlined as well as seeing into the sign below the Coke sign.



*The black of REG PAT OFF was painted over the orange sign and directly onto the brick.
The red has degraded below the black often taking the black along with it.*

The white Coke lettering was painted first very thinly. It was painted so thinly that drips were created under every letter. Don Brown didn't bother to clean up the drips because he knew that his red paint would cover up the drips when he finished the sign. What he must not have known was that he did not have enough binder in the red to allow it to last very long on the wall. Because he wanted a bright deep red, he would not have included much if any white lead in his paint mixture. He also probably figured a new sign would be painted over it in a few years anyway so longevity was not an important issue.



*White drips visible once red degraded on right side; inpainted on left;
black lettering from underlying sign visible below*

This Conservation treatment further revealed underlying paint layers by saturating the paint layers through the consolidation process. The Avalure AC-315 saturated the degraded paint and deepened the colors in the sign. This created more contrast in the image which allows the viewer to read both sign as well as the underlying signs. In the top half of the larger Coca-Cola logo, black lettering becomes apparent over an orange background. The letters are difficult to make out, but lower down within the Coke bottle, an "S" becomes legible.



Black S is visible to the right of ice cold arrow behind the metal bar

The consolidation process worked well to adhere the fragile paint to the masonry especially after each area was set down with heat and pressure. The flaking paint took on a different craquelure pattern in each of the differently colored regions. The white areas were extremely brittle and these flakes were not as flexible due to their high lead content. The white flaking paint did not set down very well but it appeared structurally stable nonetheless. The yellow areas had large aperture flakes that were protruding out far from the wall leaving wide gaps between the brick and the paint up to 1/3" deep. Beva Gesso fill material was used in a few select areas that would have easily gathered and trapped moisture throughout the year.



Beva Gesso was used in select areas to keep moisture from collecting behind wide gaps

Once the original paint was consolidated and deemed stabilized, we were able to turn our attention to filling in some areas that have been lost. Our first priority was to reinstate the signature block. Don Brown was a historically significant Wall Dog in Fort Collins past since his sign company had been located right off Old Town Square and he haad painted many signs in the area. We felt that reinstating his signature was important in telling the story of this sign and its creation. There were remnants of black and white paint remaining in the area where the signature block had been. By counting bricks in the historic photograph, I was able to identify the proper placement and dimensions of the block. Photographs were taken before during and after the signature block was reinstated. All attempts were made to design the hand painted letters as Don Brown had originally despite the fact that the contours of the bricks have changed with the replacement of a few bricks.



Remnants of the signature block along its left edge with later added bricks above



Signature block background reinstated; All white paint is original paint



Signature block after reinstatement

Our next inpainting priority was to paint over the white drips under the lettering to return the sign to a state that was intended by the sign painter. Don Brown would not have expected those drips to be visible and we felt that it was distracting to the viewing of the sign in its entirety. Don Brown was a good craftsman and the drips would have been confusing to one's reading of the image and its history. Inpainting the drips also allowed the words to become more legible for a better reading of the advertisement as a whole.



After inpainting the drips the words and the black lettering below the sign becomes more legible

Our next priority with inpainting was to address the missing letters and numbers in the lower section. Because the intention of this Coca-Cola advertisement was to announce the new 12 ounce bottle, we felt that it was historically important to bring these lost "G 12 oz" back into the image. These letters had been painted in red and then painted over very thinly in green on top. Because the red paint was so unstable, it degraded taking the green over top with it. Only small remnants of red and green remained where each letter or number had been. The BI have held up over the years which is an interesting anomaly. 1958 was around the time when paints were beginning to be produced commercially but it is most likely that Don Brown was still mixing his paints on site as he worked. It may be that the red and/or green he used on the BI had more linseed oil binder mixed in compared with the letters that had worn away years ago



G in BIG before reintegration using casein paints

Before the inpaint could be applied, the outlines of the letters and numbers had to be established. The outline of the G was still slightly visible on the sign. The 1 O and Z were traced from other letters and then a chalk outline was created using a pounced tracing. The 2 was drawn out from the historical photograph. Once the outlines were created, the casein paints were hand mixed to match the historical colors closely but slightly bluer in tone so they could be distinguished upon closer inspection of the sign.



A dramatic view of the pouncing process daubing chalk through the pounced tracing



Mixing the casein paints to match historical colors, texture, and sheen



Stippling on the new casein paint to create an aged look to integrate with the historic paint



BIG after the G was reinstated

Once the inpainting priorities were addressed, there remained a little time to address some of the bigger areas of loss. We were determined to inpaint some of the bigger areas of exposed brick so as to not draw the viewer's eye toward the damages rather than what remains. The areas along the lower edge where the umbrellas from the brewery garden had caused damage were addressed through inpainting. Also the edges of colors and letters were inpainted to make the sign more legible without making it look inauthentic. When we stood back to look at the sign and there were no longer larger damages drawing our eyes toward them, we applied a final spray application of Avalure AC-315 and took our final pictures for the archives.

CONSERVATION TREATMENT STEPS

1. Scaffolding was set up in order to reach and document the entire surface of the sign.
2. Documentation was done with photography of the sign's entirety and of close ups throughout the treatment process.
3. The masons tuck pointed the areas within the sign that had degraded and turned around a few degraded bricks.
4. The surface of the sign was cleaned using aspiration and brushing to remove surface dirt, grime and debris lodged in crevices, behind lifted paint, and on the surface.
5. Paint consolidation and saturation were done using a three phase process:
 - 1) A pre-wetting solution of Denatured Alcohol and Benzyl Alcohol (5:1) was sprayed onto the surface to increase the penetration of the consolidate by decreasing surface tension.
 - 2) Following the wetting solution, a solution of 3% Avalure AC-315ⁱ with 3% Tinuvin 292ⁱⁱ in denatured alcohol and benzyl alcohol (5:1) was sprayed on the surface.
 - 3) The solution was then brushed into and around the flaking paint to facilitate penetration.
5. Steps two and three were repeated two times to reach maximum saturation of the pigments, and to achieve adequate adhesion.
6. Once the solvent in the consolidant had evaporated, a tacking iron was placed over a piece of silicone paper over an area of flaking paint. The heat and the consolidant softened the paint allowing the flakes to relax into a more planar configuration. Then the tacking iron was taken away and pressure was applied by hand over the paper until the area had cooled down and set in place.
7. A few local areas in the yellow and white backgrounds required additional consolidant to adhere the paint to the masonry. Beva Gessoⁱⁱⁱ was applied with a spatula to these local areas. There were large gaps between the brick and the paint that would have continued to collect moisture if these gaps were not filled.
8. The missing letters and numbers were outlined on the sign using both the original pouncing technique and historical photographs. The 1, o, and z were traced from the existing letters and numbers on the sign using tracing paper and a soft pencil. The traced image was pounced with a pouncing wheel and then taped into place on the wall. A bag of loose chalk was tapped over the pounce holes to apply the chalk outline onto the missing areas. The 2 was drawn in using the historic photographs and following the

remnants of paint on the wall. The signature block was located on the wall using the blown up historic photographs and following remnants of paint left on the wall.

9. Dry casein paint^{iv} was mixed with water to create a thin paste. Linseed oil was added for exterior durability. The paint was thinned down so it could be stippled onto the wall. The colors were mixed to match the existing aged paint.
10. The drips, signature block and the "G 12oz." were inpainted using the casein paint.
11. The casein paint was used to infill loss areas around the lettering to make the sign more readable.
12. A final application of Avalure AC-315 was sprayed onto the inpainted areas.
13. The final documentation was assembled into this report including after treatment photographs.

ⁱ AVALURE AC-315 (a polyacrylate resin from Lubrizol) Walsh and Associates, 10190 Bannock St. Denver, CO. 303-457-3111.

ⁱⁱ TINUVIN 292 (hindered amine light stabilizer: HALS) Ciba-Geigy Corporation, Additives Division, Seven Skyline Drive, Hawthorne, NY 10532

ⁱⁱⁱ BEVA GESSO (an ethylene vinyl acetate adhesivewith inert mineral fillers) Conservator's Products Co. (CPC), P.O. Box 601, Flanders, NJ 07836. (201) 927-4855.

^{iv} MILK PAINT (dry powder casein, lime, and pigments) Genuine Old Fashioned Milk Paint Company, Inc. 436 Main St., Groton, MA 01450. (978)448-6336.