# Manhole Covers, Cultural Artifacts and Sense of Place

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Shawna J. Mansfield

eLearning



Trudy Abadie-Mendia, M.F.A., Ed.D., Committee Chair

Louis Baker, M.F.A., Committee Member

Megan Keith, M.A., Committee Member

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ABSTRACT

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Shawna J. Mansfield

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When a community is developed or revitalized, seldom is its urban infrastructure considered as a potential vehicle of communication. More often than not, this infrastructure occupies a silent function in its setting and becomes an expected, but unseen element in the streetscape. These components of the urban landscape have the potential to communicate a message about the neighborhood that surrounds it, or about the history of that community, or the care that was taken to create this long-lasting artifact, rather than merely performing a function and contributing to the blandness of an uncelebrated environment.

This thesis explores the opportunity that manhole covers present as cultural artifacts in a community. Placemakers and Environmental Graphic Designers, in collaboration with urban planners and community members can, and should, instill a sense of belonging, community pride and meaning through the development of a community's unique assets. Often a community may not be aware of these distinctive qualities, which can be leveraged to celebrate the uniqueness and value of the social space they occupy. These assets, often more intangible than tangible, can become the basis for visually combining form and function with distinctiveness and cultural preservation through the urban infrastructure vehicle of manhole covers. Communicating the shared values of a community through the development of sustainable cultural artifacts has the potential to establish or revitalize a community's identity and message. This valuable approach to placemaking unifies the design hallmarks of the fields of graphic design and urban planning to combat the degradation of our communities and reestablish the preeminence that artifacts and our shared values should hold in our daily lives.

**KEYWORDS**

Manhole covers, sense of place, cultural artifacts, streetscape, street hardware, placemaking, environmental graphic design, urban planning, urban infrastructure, unified design.

## INTRODUCTION

Urban infrastructure is all around us. Daily we interact with sidewalks, curbs, and traffic lights; they make up the streetscape of our communities. We function in our environments with little to no consideration for the elements that have been placed along our path. A utility box sitting on the corner of an intersection has the important function of managing traffic flow, a curb creates a safe division of space and provides organized transitions between spaces, a manhole cover allows municipality workers and engineers access to valuable underground infrastructure, but what about the cultural or aesthetic value these elements could each bring to the same environment? How could graphic designers use existing infrastructure in a community to effectively impact a sense of place?

Through inquiry, it became evident that there is an opportunity for graphic designers to consider elements of the street as structural vehicles for communication in an environment; not ephemera, but sustainable artifacts that will speak of the community in years to come. It also became clear that graphic designers have a responsibility to do more than merely create something aesthetically pleasing. The value we can bring to the people in a community by representing their cultural influence through enduring artifacts also honors our history as graphic designers by recalling the importance of unified design in our environments. Philip Meggs condemns the machine age for creating a chasm between humanity and the manmade environment. Where once the functional items of our culture were also the beautiful evidence of our culture, there is now a severe lack of history in our everyday artifacts (Meggs iv). There is a chasm in our environments, in our places, that needs to be bridged once again.

A pervasive element of the streetscape, manhole covers are a seemingly mundane and purely functional part of the urban infrastructure. Yet there is an opportunity for them to be more

than a functional element in the streetscape, by combining the physical space with the people and culture of that space, known as placemaking. These pieces of street hardware, as will be argued through this thesis, can be used to create and celebrate a sense of place within communities and, by honoring them as artifacts, they can have a long-lasting cultural and historical impact for decades to come.

**RESEARCH SUMMARY**

Manhole covers are everywhere: on the street, on the sidewalk, in large cities, small towns, throughout neighborhoods; they are a global standard for any community with sewer and water systems. They are easily customizable, secure in their environment weighing over 150 pounds each, and serve an important function as an access point for the sanitation and utility workers of every city. As such, their pervasiveness of form and functionality in our societies makes them ideal candidates to present the potential urban infrastructure holds to become cultural artifacts. Research for this topic is drawn from books and journal articles based in the domains of urban planning, urban and landscape architecture, social behavior, placemaking, environmental graphic design, and experiential graphic design. As the research for this topic developed, it became evident that there are a limited number of researchers interested in the topic of manhole covers as artifacts of culture. Since 1974, there have been four books written about this form of urban infrastructure. As of today, only three are currently available for purchase since the original book from 1974 has now been out of print for over two decades.

While researching how graphic designers can represent a community through the long-lasting design of urban infrastructure, it has been necessary to establish a full and tangible definition for sense of place when considering design as a voice for a community. In their 2016

journal article “Utilization of Place-Making Approach in Urban Spaces Using Historic Mansion Attractions,” urban managers Molavi, Mardoukhi and Jalili emphasize the importance “the character of a place” has on sense of place. The physicality of a space has implications for how that space feels through the materials, context and elements that make up the space (64). In contrast, Seattle artist Jack Mackie takes a more emotionally-driven stab at defining sense of place when he states that it should “attract people, build community by bringing people together, and create local identity” (Spayde 25). Both perspectives bring value to the table when looking at sense of place through the eyes of a placemaker. The marriage of the physical space of a community and the emotional value of the people in that community is invaluable in establishing an authentic sense of place.

As a field, Environmental Graphic Design (EGD), identifies three hallmarks that establish a place: identification, navigation and interpretation (Schwanbeck). When used together, these concepts create a “sense of home” (Lynch 4). In an interview conducted by Jon Spayde, the senior editor of Public Art Review, urban designer Herbert Dreiseitl speaks on his approach to creative placemaking, originally inspired by his endeavors with heroin-addicted youth. His work was fueled by the realization that their surroundings were an avenue through which to reach them and establish a sense of belonging that would change their own perspectives about themselves and instill pride of place. In order for placemaking to be an impression of our culture, utilizing the language and principles of placemaking, it is of the utmost significance to include people from the local community in the conversation. As such, Dreiseitl’s work is dedicated to the overarching goal of making people feel at home in a space in order to make an impact on the person (Hart 33). In Andy Schwanbeck’s journal article “Environmental Graphic Design: Changing the Perceptions of Divided Communities through Cultural and Social Connectivity”,

he examines at how graphic design can "promote cultural, historical and economical connectivity" through placemaking (24). This is where the opportunity lies for placemakers to utilize existing urban infrastructure to create outcomes that maintain the values of a community. There is history in every community and values inherent to the people in those communities.

The primary authorities on the history of American manhole covers are Mimi Melnick, an advocate for their historical significance, and her husband Robert, a photographer, who assisted her as they searched through document records nationwide. They began their research in the late 60s, publishing a book in 1974 focused in Los Angeles and subsequently went countrywide thereafter. Their 1994 book *Manhole Covers* serves as a historical reference for this topic as a result of the many archives they dug through from foundries, libraries, city public works and patent offices (Melnick 13). Through their efforts, the history of the manhole cover and other *street hardware*, a term coined by the Melnicks, is documented and preserved in a thorough and informative volume (1-28). A kindred spirit to the Melnicks, photographer, writer and historian Diana Stuart, known as "The Manhole Cover Lady" in New York City, has positioned herself as an authority on NYC's covers in her 2003 book *Designs Underfoot*, having identified pattern names, foundries of origin and eras represented throughout the bustling streets (see fig. 1). In addition to covering the five boroughs, she was permitted access to areas under the jurisdiction of The Port Authority of New York and New Jersey in order to photograph covers at all three airports and in the Holland Tunnel. Her work serves as both a glorious visual reference to NYC's "urban archeology" and as documentation to support her efforts for preservation (Stuart 15). The commonality between the Melnicks and Stuart that is relevant to this research, beyond their shared appreciation for manhole covers, is their advocacy of the historical and cultural significance these iron discs hold.

The book *Drainspotting* by Remo Camerota, another expert on manhole covers, showcases the manhole cover design phenomena of Japan (see fig. 2). In the 1980s the Japanese needed to update and install new sewer, power and water systems throughout the country and the cost associated to the people was not seen favorably (Camerota 7). Nagashima Foundry president Hirotaka Nagashima recalls the development of the culturally relevant designs on these manhole covers came as the Japanese economy was beginning to flourish. City councils were looking for ways to make their communities aesthetically pleasing and, at the suggestion of Nagashima, they began to purchase covers from them that held designs representative of each prefecture (see fig. 3). The covers became a symbol of local identity and improved the image of the new sewer systems in Japan, changing them from being perceived as dirty to an artifact of community pride (Camerota 10). Now, 95% of their municipalities have custom manhole cover designs representative of their diverse communities, taking an often-overlooked functional element and elevating it to an artifact of historic importance (Camerota 7).

Graphic design and the utilization of existing urban infrastructure can both represent and change perceptions of a community, especially when considering the value inherent in a community's history. In the 1990s, New York City mayor Rudy Giuliani was in favor of demolishing an abandoned railroad, known as the High Line, in the Chelsea community. Seen as a visual detractor to the neighborhood, he felt the railway infrastructure had to be removed in order for the community to be able thrive and succeed. Conversely, locals Joshua David and Robert Hammond saw an opportunity to celebrate the history of the neighborhood, rather than erase it. Now known as the High Line Park, the structure has successfully increased resident traffic, tourism, and development desire in Chelsea, without sacrificing a community's history. (Goldberger). This action of urban preservation and regeneration shows the importance of the

community's involvement and that history can be honored even as a neighborhood moves itself forward.

Preserving our history through functional artifacts is not a new concept. Museums are filled with vessels representative of eras well before our time that communicate the cultural values of the people who created and used the objects. In 1995, sixteen manhole covers in the city of Los Angeles were listed as historic artifacts worthy of preservation and protection thanks to the efforts of Mimi Melnick (Oviatt Library). Diana Stuart has not had such success in New York City. Through her many years of research and historic conservation efforts, she has established herself as not only an authority but also an activist for the meek manhole cover (12-24). Her publication documents many manhole covers which have since been removed or paved over with cement. She describes it as an "incalculable loss" and "the historical record they offer is irretrievable once gone" (22). Building on the work of these sources, this thesis will prove there is an opportunity for graphic designers to utilize urban infrastructure artifacts, like manhole covers, to represent the history of these communities through visual communication that imbues a sense of place, is impactful historically and culturally, and will last for decades as sustainable graphic design.

## SENSE OF PLACE, PLACEMAKING AND ENVIRONMENTAL GRAPHIC DESIGN

The urban landscape of a community is highly visible because of its physicality; however, the essence of a community is much more than what can be seen in the street, it is about the sense of the place: this is where the fields of Placemaking and Environmental Graphic Design thrive. Establishing a clear definition for the phrase *sense of place* is challenging because it differs slightly, based on which field of study defines it. Urban theorist, Kevin Lynch, likens a

sense of place to the feeling of security we feel with a familiar or easily identifiable surrounding (5). A combination of the safety we feel internally, alongside the visually recognizable elements we see externally can offer a "sense of home". When defining what "place" meant to him, landscape architect professor Ned Crankshaw acknowledges that there are sometimes opposing opinions on what this definition should encompass but chooses to narrow it down in relation to a town's vitality, and as such defines place as "a physical reality in the present" (82). Though he acknowledges the value of social behavior in establishing a sense of place, Crankshaw opts to put the emotional and psychological side of place in the background so the physical space of a town, and how it functions, can take the forefront. In agreement with both Lynch and Crankshaw, Norwegian architect and architectural theorist Christian Norberg-Shulz defines *place* as having two main factors: space and character. *Space* is based on the physical three-dimensional elements of a place and *character* is based on the atmosphere of a place (11). This is interesting, and somewhat conflicting, since the urban managers Molavi, Mardoukhi and Jalili defined *character*, when referencing sense of place, as the physical attributes of a space (60). So, though it is true that the definitions for *sense of place* may be varied, their differences are far from extreme. The inclusion of the physical space, along with the potential emotional values shared in the space, are what we will use going forward as a complete definition of *sense of place.* How can this definition now be used to empower graphic designers when considering the communication opportunities in the urban infrastructure of a community?

This is where the field of placemaking comes into play. According to the Project for Public Spaces, placemaking is an executable action around the question "What if we built our communities around places?"

> Placemaking inspires people to collectively reimagine and reinvent public spaces as the heart of every community. Strengthening the connection between people and the places they share, placemaking refers to a collaborative process by which we can shape our public realm in order to maximize shared value. More than just promoting better urban design, placemaking facilitates creative patterns of use, paying particular attention to the physical, cultural, and social identities that define a place and support its ongoing evolution (PPS).

This is exactly how a community can realize its values and build, or re-build, its self-confidence, by incorporating placemaking into the process. The Local Distinctiveness Project in London had a goal to end the "builder-special" or "cookie-cutter" construction that was showing up in neighborhood developments, not only in Britain, but globally. They asked the locals in each area, "What makes this place different from another?" What could be identified either manmade, natural, or intangible that makes your community different from any others – whether the town over or hundreds of miles away? (Walljasper 134). By focusing on the things that we may either take for granted, such as the vistas outside our windows, or we lose sight of because we see them every day, such as the unique architecture on a street of old homes, or the unrecognized cultural values of our community, such as generations of festivals or craftsmanship, the Project was asking community members to see their environment in a fresh light. Where once there may have been none, or even negative, perceived value, by reinvestigating, neighborhoods have the opportunity to name the elements that make their home a place to both value and have community pride in.

The community is the key. Placemaking is, at its heart, community-based. According to the time-honored book, *The Image of the City*, "an environmental image may be analyzed into

three components: identity, structure, and meaning" (Lynch 8). Identity and meaning come wholly from the people within that environment. Oftentimes communities are built or rebuilt to look alike, as if they were cut from the same molds. These physical elements we can see are called the hard branding of an environment. To solely look at the hard branding, and not include the soft branding, means there is no community identity that makes one different from the other. This is a case of copycat syndrome. If *Town A* has "this kind" of building, *Towns B, C* and *D* decide they need the same kind of building, despite how it fits into the environment. Just as The Local Distinctiveness Project aimed to remove the nondescript elements from the landscape of their London communities, so should placemakers strive to squelch the "We want that, too!" mentality of city councils and urban planners.

Hard branding is easy to identify, and often we see the execution of hard branding in the placement of city seals and logos on buildings, signs, and infrastructure like manhole covers. It is placing a city's brand on the hard surfaces, much like a commercial product would do with its merchandise and packaging. However, a community is not a product. Therefore, the basis of place-branding, though useful in terms of tourism and marketing, is useless for building an environment that truly celebrates itself and its unique identity (Julier 871). Soft branding is the hero in this case. In marketing terms, soft branding refers to the child brand of a parent identity who maintains their own distinct brand even though they are a part of the parent company (Julier 873). In terms of a community identity, this would translate to being the local neighborhood: the child, versus the whole city: the parent. We often think of cities as a whole. New York City is *The Big Apple*, *the city that never sleeps*, and *the home of the Great White Way*. Miami is full of night life and beach life, with a take on Art Deco that is all its own. Paris is *the city of love*, *the city of lights* and the *fashion capital of the world*. Yet, each of these cities, as with every

municipality large or small, is made of many neighborhoods, parishes, or precincts. These parts are the true life and vitality of any whole. Through soft branding, the culture of each of these communities is allowed to take the forefront and stand alone as an identity unto itself. Part of the whole, but wholly separate at the same time.

To a marketing agency the terms of soft and hard branding translate well in their minds, but to an urban planner the terms soft and hard infrastructure make more sense. To a placemaker, or Environmental Graphic Designer, both iterations are valuable, confirming once again the necessity of collaboration when making or revitalizing places. Author, speaker, and city planning adviser Charles Landry, in his book *The Art of City Making*, explains, "Soft infrastructures are the atmosphere, ambiance and milieu which the hard infrastructures enable" (281). Without a doubt, the intangible factors of this definition make it difficult to put into black and white what soft infrastructure looks like. And because of this challenge, soft infrastructure, the needful atmosphere of placemaking, is often overlooked or dismissed.

> …some feel it is difficult to quantify the precise economic value of a system of associative structures networks, connections and human interactions that underpin and encourage the flow of ideas between individuals and institutions to generate the products and services for wealth creation (Landry 281).

When both the physical (hard) and the emotional (soft) elements of a place are considered, that consideration gives back to the community a "sense of self" which is imperative to building the self-confidence that allows community members to feel ownership and a sense of belonging because they fully identify with the image of the environment around them (Landry 290).

Environmental Graphic Design (EGD), a multi-design-discipline industry, is at the forefront of placemaking. As the makers of the signals and signs that provide communication for individuals to travel through an environment, and as the designers creating experiences and identity for those same individuals of a community, it falls heavily upon us to take placemaking to heart. As noted, there are three hallmarks in the field of Environmental Graphic Design: identification, navigation and interpretation. These three hallmarks correlate beautifully with urban analyst Kevin Lynch's three components of the environmental image of a city: identity, structure and meaning. Identification and identity are about pinpointing what makes an environment unique and distinguishable from other environments (Schwanbeck 25). These unique factors could be physical, cultural or a combination of both. Where once the early 20th century bungalow home was considered an eyesore, there are several communities which have now embraced and celebrated these homes, imbuing them with a sense of community pride that brings value not only to the homes and local economic structure, but to the people in the community (Walljasper 134). Navigation and structure refer to the security found in the patterns provided to easily relate one object to another (Lynch 8). When a community is easy to navigate within, or the language of their structure is easy to interpret, the fear of being lost evaporates. Knowing where we are in the context of the place we are standing and being able to navigate ourselves to our desired location empowers people in a community, removes doubt and, most importantly, it builds self-confidence. Interpretation and meaning correlate more loosely than the previous two hallmarks. *Interpretation* is "sharing information about the environment that describes its context in the broader scope of society," whereas *meaning* is about the practical or emotional value the observer finds in the object (Schwanbeck 25, Lynch 8). The commonality here is that both are about more than the actual object that may be in the environment.

Interpretation is relating the object to the environment as a representative to a larger audience or municipality. Meaning is relating the object to the person who is interacting with it in the environment. A person brings a world of their own emotions, memories and history with them, and as such can infer a different meaning from an item than someone else may. Together these two elements help placemakers realize their work is not solely about the environment externally, but also about the environment internally.

With these directives in mind, EGDs have a responsibility to create community-centered and human-centered solutions for these environments, and the manhole covers of the streetscape provide an excellent vehicle for communicating these solutions.

## CULTURE AND HISTORY

The Industrial Revolution brought on the commonality of creating everyday artifacts to be aesthetically pleasing rather than devices that also act as representatives of cultures (Meggs ix). Museums are full of pre-nineteenth century textiles, pottery, jewelry, and personal belongings that reflect both function and form. Items were created to have purpose and embellished with patterns or scenes of life that represented shared values. Archeologists dig through volcanic ash to recover items that give us a glimpse of a community who, in every other way, have been wiped from the planet. Through these historic remnants of everyday life, society tries to reconstruct and preserve the past by gaining understanding of that culture's identity.

What is culture in relation to the identity of a community? "Culture is who we are, the sum of our beliefs, attitudes, and habits" (Landry 245). Culture is highly intangible; like DNA it is essential but challenging to decipher. It is the differences and unique qualities of a community, the roots from which it grew, and the layers of history represented in the daily behavior of its

members. Buildings, music, food, industry, past, present, and, importantly, the future are all identifiable by the "specific symbols of the city and its neighborhoods" (Landry 118). Learning to identify these symbols develops from the necessary and needful interaction with the people who live within these environments. This brings us back to the hallmarks of *interpretation* and *meaning*. Without digging into and exploring the lives, history, activities, and ancestry of the people who have been a part of that specific community, it is impossible to know the extent of the cultural identity that exists there. Why is there pride or lack of pride in a community? By meeting, speaking with and engaging the public, the symbols can be uncovered more truly than could have been interpreted from the archives of a library, the dig of an archeologist, or through the eyes and experiences of a tourist.

"Rapid changes, especially modern ones, in historic cities have led to losing meaning in many urban spaces with identities and have made them useless" (Molavi, Mardoukhi, Jalili 60). It is socially desirable for our communities to no longer be machine-age driven but to find, or re-find, their own identity and community pride through the history and cultures that have lived and currently live in these environments. If moving forward means the past is obliterated or ignored, it does not seem as though the forward movement would have much substance and therefore would lack a foundation for the generations that are being built upon that movement. Instead, any push for improvement, preservation and regeneration needs to look to the culture and the history of the community as a guiding line to its future endeavors and growth. "Our cities are a totally artificial environment – and that's a fact" (Hart 33). Herbert Dreiseitl, a proponent for redesigning the urban experience, speaks about placemaking as a public engagement with the environment outside of the physical structures. In order to truly accomplish this goal, it is necessary to engage with the people in that community (Hart 33). The act of harnessing the

essence of a neighborhood is necessary in establishing a firm precedence for how placemaking can impact and preserve a place. By engaging with the community members, a restoration of confidence and history is attained, furthering the cultural identity of that community.

Randy Hester, a landscape architect, recognizes that planners and residents may have differing opinions on what is important to the same town's sense of place. Where an architect may see an empty lot, a town resident may see an annual festival (Crankshaw 84). For the community, the empty lot is a part of their history and representative of their local customs and culture. To have it developed into a strip mall, for instance, could negatively affect the community culture because they would feel the loss of a piece of their identity.

An example of this phenomenon can be seen in Delray Beach, Florida where a weekend event to celebrate the diversity of the city has now become the Delray Cultural Loop and History Trail. Working with representatives of each local culture, African American, Haitian, Anglo, and Latino allowed them to "showcase the community's rich and diverse cultural heritage" (PPS 7). The local community was gifted the opportunity to see their hometown with new and fresh eyes. Doing so elevated the residents' sense of pride in their diversity, culture, and history. As with most communities, there can be challenges when striving to be inclusive of a diverse range of cultures, and Delray was no different. The Delray Cultural Loop and Heritage Trail has made social paths and built bridges that promote healing and celebration, rather than divisiveness (PPS 8).

In Germany and parts of Europe, there is an initiative by one artist, Berlin-born Guenther Demnig, to ensure the history of the Jews taken from their homes during the Holocaust are remembered. He lays brass bricks, called *stolperstein*, or "stumbling stones," into the pavement outside the homes where each victim lived (see fig. 4). On the stones are the names of the

victims, the year of their birth, their deportation date, and the date of their death. “Most important on the stone are the words, ‘Hier Wohnte’ (‘Here Lives’) (Gould and Silverman 796). This use of the urban infrastructure, the sidewalk and pathways of a community, to bring attention to the history and culture that was once lost and forever altered is a valuable example of creating historic artifacts today that will live on for generations to come. The difference between this application of memory and the large memorials that are created for such public remembrance, is that only one of them is local to the community where those families grew and thrived and invested themselves. Only one of them will be seen by residents every day. Demnig’s work does not come without protest. Homeowners feel these bricks, or “quasi-tombstones” could be detrimental to property values. Some feel the fact that people trample on these names daily is adding insult to injury (NPR) (Gould and Silverman 796-797). This quiet protest of these installations could easily, and positively, become the seed for a placemaking collaboration between artists, urban planners, environmental graphic designers, and historians. How could the history of such an important event be represented in the places where it occurred? What else about the lives of those who were and were not taken could impact the current and future culture of these communities?

There is such an opportunity in the use of urban infrastructure to preserve the culture, past, present and future, as artifacts through the framework and longevity of urban infrastructure. Philip Meggs states, “There is a growing awareness of the need to restore human and aesthetic values to the man-made environment” (ix). As graphic designers, we can do this by investing into the long-lasting structures of the streetscape. The functional and visible elements of our community can also be the vehicles that are employed to communicate a sense of belonging. By learning the symbols of a culture’s identity and then translating those signs into the image of the

urban environment, the elements of their identity, their cultural DNA, can be visually heightened to better impact a sense of place and community pride.

## URBAN INFRASTRUCTURE, STREET HARDWARE, AND MANHOLE COVERS

In order to consider using the infrastructure of the physical environment to convey identity and meaning, we now need to examine the communicative potential of an object. In words and signage, we would consider the legibility or readability by evaluating the typeface, contrast, and spacing, but for an object we need to assess the *imageability* it has to communicate a message to the public. Imageability is defined as "that quality in a physical object which gives it a high probability of evoking a strong image in any given observer" (Lynch 9). In the urban infrastructure, there are many repetitive elements seen along the streets and sidewalks: grates, lampposts, utility boxes. Of these artifacts, the manhole cover lends itself easily to becoming an object with good imageability. Its consistently circular shape is easily identifiable and it has the flexibility to be customized without sacrifice to its structure or function. When placemaking, looking to the essential *working elements* is key because they will be there whether they are considered or not. Their function makes them essential, and their imageability makes them valuable for showcasing distinctiveness in a place.

Manhole covers are like diamonds in the rough, hidden jewels of the street. Mimi and Robert Melnick, manhole cover historians, labeled these elements as "street hardware" in the urban landscape. Hardware, in its most basic interpretation, is the physical components of a system, and these discs are certainly part of a larger street system. Of all the street hardware, manhole covers present themselves as an excellent vehicle to convey the value of the community that surrounds them. Manhole covers are essential access points for the underground

infrastructure of a city. Sewer systems, water drain offs, and utility lines are common materials to be found beneath the manhole cover. Some are large enough to accommodate not only an adult human, but also equipment (see fig. 5). Since these manhole covers are placed both in pedestrian walkways or in the lanes of a street, they must be hardy. Weighing in between 150 to 300 pounds and made of grey cast iron, they can last for well over a hundred years, lending themselves to be heroes of sustainable design.

Conventionally, manhole covers are used to identify the utility below, making it easy for city workers to know which one they need to remove for access. In the 1800s it was common to see the name of the foundry along the rim, and sometimes covers even showed the year they were cast. These two attributes alone give us a glimpse of the history of an area. The owner of the foundry, the year of the cast, the time frame in which it was produced, the development of communities that caused the need for the cast, the paving of sidewalks and roads: so many details held in merely the name and year. Yet, the clues to the past do not stop there. Glass inserts were used on occasion to allow light into the tunnels below for the workers, pre-electricity, hinting to the behavior influencing these design choices (see fig. 6). Patterns were given names: diamond patterns might be more popular with one foundry and a tic-tac-toe pattern might be more common with another foundry (see fig. 7). Manhole covers made in the Victorian era of New York City, still visible today, bear filigree and embellishments clearly imparted from the architecture and design of the era (see fig. 8).

In Seattle, in the 1970s, urban planners explored and executed the idea of using manhole covers to highlight landmarks. With a map on the cover that bore streets and popular landmarks, it was navigation of convenience for pedestrians who were unfamiliar with their surroundings (see fig. 9). Seattle also engaged a local artist, Nathan Jackson, of Northwest Native American

heritage, to create a design that reflected and gave homage to the people who inhabited the land well before it was ever called Seattle (see fig. 10).

In Milan, Italy, manhole covers have become fashion statements during fashion week. With designs commissioned from artists worldwide, they are first placed in the streets to perform their utilitarian function and later auctioned off (see fig. 11). Whereas in Japan, manhole covers have become an integral part of the streets of their communities. There they have created custom designs for each community that reflects the heritage, beliefs, iconic imagery and nature that is unique to each (see fig. 12). This integration all began as a way to give pride of ownership to the new sewer systems that Japan needed desperately to implement in the 1980s. The cost to the people was unfavorably received, so the idea to visually show the citizens where their taxes were being invested was proposed by one of the foundry owners. This strategy was extremely successful, and now, the iconic, detailed, and often colorful, manhole covers are dappled across the streetscapes of many communities in Japan. They have even become trading cards to be collected.

What happens to these long-standing working elements of the streetscape when a community faces revitalization or urban regeneration? Thankfully, in recent years the focus of regeneration has leaned more toward making spaces, or places, for the public. Though this realization of how spaces can be more accessible for the public is positive, what often occurs is the installation and creation of new, fresh, but unfortunately, copy-cat spaces which hold no meaning related to the past or the future of a place. Even brand-new spaces that have never been inhabited or built on before can begin to layer soft infrastructure into the build, looking to how this culture could be represented in the future. Placemaking, as has been determined in this analysis, must include the people of the place into the conversation.

WaterFire, in Providence, Rhode Island, was an event created to celebrate the "daylighting" of the local waterways, two rivers. Previously covered by roads, highways, rails, and rail yards, the city of Providence converted the area to "public promenades and pedestrian-friendly parks" (PPS). The infrastructure changed drastically from one of only function to one of form and function. Yet, both iterations of this space were still hard infrastructure at their core. As a public art event WaterFire brought locals to the waterways and showed them how they could bring meaning to the space through the element of soft infrastructure. With fire baskets lining the promenade and maintained by "fire tenders" going from basket to basket in small boats, the fragrance of the burning wood along with "powerful and mesmerizing music" emanating throughout the crowds meandering along the walkways, created an atmosphere that "symbolized the renaissance of the city" (PPS). Due to the impact this event had on the citizens and the pride it evoked in them, this now cultural event had become a permanent part of their annual history. Artist Barnaby Evans, creator of WaterFire, saw the value in the changing and regeneration of this urban landscape, and as a result has himself become a part of this community's identity.

Unfortunately, in the realm of street hardware, urban regeneration often overlooks the community values instilled in these pieces. For manhole covers in New York City, historic advocate Diana Stuart sees the destruction of these artifacts as detrimental to our preservation of history (22).

> Sadly, unique specimens, many with sculptural qualities, are being removed or permanently covered over by paving, an incalculable loss. The inestimable value of visual historic documentation and richness of design is perishing rapidly. An example of such tragic loss is cementing over covers during reconstruction or installation of new sidewalks (22).

Even in historic districts, manhole covers are not usually protected, with the exception of a historic district in Los Angeles that Mimi Melnick campaigned to preserve. Since 1995, those sixteen manhole covers have been listed as protected from demolition and relocation. The industrial lack of consideration for the cultural values the working elements of the street can have, is a prime example of lack of community involvement when changing or remaking public spaces. Urban regeneration does not inherently bring a sense of place and belonging with it. People and the lives lived in these communities are an essential part of what creates an atmosphere of identity. Harnessing that intangible, the soft infrastructure, and infusing it into the urban landscape, is how culture is represented.

How culture is represented in the urban landscape brings the conversation back to the benefits of imageability and sustainability. Manhole covers of the pre-industrial and industrial eras still dot the streets and sidewalks of our country's oldest cities. Their longevity alone indicates their worthiness as objects of sustainable design. The consistency of their shape, function, and placement present them as viable structures with valuable imageability. It is of no coincidence that municipalities, in a straight forward hard branding way of thinking, have placed their city seals on newer covers for the past few years. The ease of customization, and the rarely changing streetscape, provide an opportunity for making a mark. Our feet feel the changes in our path, whether it be composed of bricks, pavement, gravel or rattling grates. We notice where we are walking. The opportunity for Environmental Graphic Designers and urban planners to work together to represent a community through these textural elements, rather than simply placing a city logo on a manhole cover, is evident when considering both the conventional and unconventional uses of these pieces of street hardware.

## UNIFIED DESIGN AND CULTURAL ARTIFACTS

Community identity is rooted in both the tangible and intangible aspects of a place, and the artifacts of urban infrastructure contribute to the unity of those elements when their form and function are planned with intention. The essence of unified design is to have harmony among the elements of the design. This harmony is achieved through the conscious creation of cultural artifacts in a community – and for a community – where graphic designers can be a catalyst in developing new placemaking standards. The artifacts become symbols of the history and heart of the community, but the process to create them and to distill the knowledge shared by the members of each diverse community is the essential element that cannot be overlooked. The phrase "home is where the heart is" comes to mind when considering the depth of intimacy needed, between the street and the community members, to move the urban infrastructure forward as symbols of these elements. Home is the physical space, the hard infrastructure of a place – but the heart is the intangible. It is the beat of a community, the rhythm that keeps it alive and moving. Without this intangible ethos a community dies. That is what almost happened to East Liberty, a neighborhood of Pittsburgh, Pennsylvania. In the 1950s East Liberty was a thriving community of predominately African-American citizens. It suffered at the hands of urban renewal in the 1960s when new highways destroyed its environmental structure. It wasn't until the 1990s that the community led a regeneration project to reclaim their identity and economic worth. They have even demolished high-rise housing projects to gain back the identity of the physical space that had been lost (Walljasper 140). In doing so, the people of East Liberty protect their community from the current and devastating trend of gentrification by keeping the development equitable and inclusive of its residents (East Liberty 1). As a result, the people in this community have reclaimed their identity. Their success story, still in the making, has been

closely followed by placemakers and urban revitalization leaders such as Roberta Brandes Gratz as they continue to watch the rebirth of this community with increased anticipation (Walljasper 140). If a community on the brink of being forgotten can pull up its bootstraps and reclaim its sense of belonging and identity through a unified approach to reconstruction, then there is hope for any struggling neighborhood.

Placemaking thrives when the directives of environmental graphic design and urban planning are unified. Through the unification of the visible infrastructure and the atmospheric heartbeat of an environment, communities display artifacts that showcase their uniqueness through the streetscape and contribute to the instilling of a sense of place and pride.

Identity is a strong part of what gives people a feeling of belonging. We create cultural artifacts continuously based on our sense of belonging or self-identity. These artifacts, such as annual yearbooks or family reunion t-shirts, are often temporary and, most importantly, held onto by only one person. For a community, shared values need to be preserved and displayed in a shared environment. By unifying the unique message of a neighborhood with the sustainable urban landscape within the form of a piece of urban infrastructure, graphic designers create multigenerational artifacts of identity and place.

A cultural artifact is a physical representation of history, an object that infers meaning or exhibits the values of an era and people. Manhole covers have already proven, in both historic settings and contemporary settings, to be ideal candidates as artifacts for representing a community's culture. By infusing the urban infrastructure of a neighborhood with symbols of a neighborhood's history and identity, these physical manifestations provide not only a visual representation of their culture, but also have a psychological impact on the sense of pride of community members (Landry 329). Yet, if this visual representation is approached through a hit-

and-miss method rather than from a purposeful attention to community identity, the impact will be lost and the efforts fruitless. As a result, the community would become just another nondescript or "cookie cutter" environment, lacking in true representation of the people.

When considering the assets, or positive representations, of a city the lineup consists mostly of the tangible elements of the community. Gainesville, Florida, for instance, has a plethora of trees throughout due to protective city and county ordinances that have been in place for decades, and is home to the well-known University of Florida (UF) whose mascot is the Florida alligator. The number of local company logos that use either a tree or an alligator are too numerous to count. Merchandise representing the city of Gainesville is found most often in the university's signature orange and blue colors. The outsiders' perspective, and sometimes the insiders' perspective, of Gainesville is often based solely on the perceived value of the University of Florida. Being a large entity in a mid-sized town, it is easy for neighborhoods to be overshadowed by UF's value to not only the municipality of Gainesville, but to the State of Florida. Yet locals may see the University and the city as two individuals, rather than one and the same. Neighborhoods within the city may see their own identity as fully more important, and separate, from this highly visible entity.

> To drive a city forward there needs to be a few powerful ideas around which disparate communities of interest can gather and coalesce. These should capture the imagination by tapping into the deeply felt desires and widely acknowledged assets, or even problems, but only if solutions are also proffered (Landy 329).

The most visible or widely acknowledged attribute of a community does not necessarily belong as an image on every hard surface throughout the community. This approach would be similar to placing a city seal on every manhole cover. There is no value to be assessed in the city

logo being placed on hard infrastructure; it is merely a representation of the governmental aspect of the municipality of which each neighborhood is a part. The challenge for designers is in how to represent the assets and desires of a community, not a municipality, through a unified design solution. The assets and desires are often unknown to the depth they need to be uncovered. Communities who are struggling with identity often underrepresent themselves and their value because they do not know they have an asset to capitalize upon. A community in Union County, South Carolina found themselves floundering for hope when both economic and racial struggles reared their ugly heads in the mid-1990s while the whole of our nation watched. Art Sutton, a local radio station owner, organized a community theater project, *Turn the Washpot Down*, highlighting local history through stories "that didn't white-wash history but at the same time instilled a sense of pride in the community" (Walljasper 78). Critically acclaimed, with sold-out peformances, critic Linda Frye Burnbam states, "It has already saved [the community's] soul" (Walljasper 78). Through this experience there is evidence that daily immersion in the environment is necessary in order to understand the potential of that environment to symbolize the ethos of the community.

Landry does not only speak about the potential the positives, also known as the assets, of a community have to offer when developing identity. Problems may also present a solution to an issue which a neighborhood may have otherwise considered a lost cause. The East Liberty revitalization is a prime example of this. The urban renewal plans were party to the downfall of the community's development, sense of pride, and economic vitality. The problems were also detrimental to the possible growth of the community. By addressing the problems, the solutions that arose out of this imaginative approach to urban regeneration have been the catalyst to the success of their community's renewing.

A resident in Toronto, Ontario sparked a change in her community by identifying a problem as an asset that was underused and unkempt. Duffin Grove Park, the local park near her home, had become an unsafe environment due to both "local toughs" loitering and lack of maintenance. Instead of succumbing to the fear of what was, she initiated what could be. Here was a pain point in the community that could become a valued asset through revitalization. By working with her neighbors and with the "tough" kids that were hanging in the park, who also liked the idea of improving the space, the community reclaimed a piece of their identity. Not only did they restore the function of the park, they improved the cultural value by creating spaces for community. A Portugese-style bread oven, "which members of the neighborhood use to cook community dinners and throw pizza parties" and a fire circle that allows residents to "cook meals over the open fire" have directly impacted, for the better, the now shared values of the community (Walljasper 127). It took only one person to identify an asset and capitalize on its potential, but it took the whole community to revitalize their asset.

Unified design, as an approach to the creation of cultural artifacts, is an opportunity to create "contrast and specialization of individual character" in communities, rather than copying the work seen in other cities (Lynch 109). By doing so, we are placemaking with intent and collaboration. The history that was and that is to come in a community belongs only to itself. The assets that make the community different and wholly unique can be celebrated rather than undersold or unrealized. This is what brings graphic designers back to their own roots.

> The immediacy and ephemeral nature of graphic design, combined with its link with the social, political, and economic life of its culture, enable it to more closely express the Zeitgeist of an epoch than many other forms of human expression (Meggs ix).

Taking the intangible and making it tangible is precisely the kind of unified design graphic designers have been creating for centuries. Our history proves our capability. From the Sumerians who invented writing, to the Egyptians who created manuscripts of word and image, to the Chinese block printers, and the fifteenth-century printers who created books, previous generations of design experts present a "rich heritage and history of graphic design" (Meggs ix). The growing need to bring the humanity back into our manmade environments has never been stronger. The urban landscape, the streetscape of each community, is ripe with potential to house artifacts that truly communicate and represent the culture found there.

## CONCLUSION AND FURTHER RESEARCH

"People [like Mary Miss] discovered that it wasn't enough to put a thing in a plaza and call it good–because the plaza was a wreck!" stated Seattle artist Jack Mackie in reference to public artists Mary Miss and Alice Adams who have used placemaking as a compass for decades (Spayde 24). It certainly is not enough to put a unique piece of street hardware in a community and think that the hardware alone will change the community pride or sense of place. However, through repetition, "environmental graphic design, along with other visual communication elements, can be used to improve the perceptions of a developing neighborhood" (Schwanbeck 31). Collaboration with urban planners, historical societies, community members, and environmental graphic designers is key to successfully bringing placemaking into the urban infrastructure. Manhole covers, these discs of grey-iron, portals to the underground structure of a municipality, could become that cultural artifact for a community within that city. Their necessity in an environment makes them readily available and their imageability has proven to be ideal as a vehicle of communication.

Further research into the potential of manhole covers as identity artifacts would include testing this theoretical thesis to produce proven examples. Currently customized manhole covers, though engaging, are limited and often showcase the city seal rather than values that pertain specifically to the neighborhood in which they are placed (see fig. 13). Identifying the assets of a community, understanding the meaning, and interpreting it brings the city planner and the environmental graphic designer together with the opportunity to find imaginative solutions that represent a culture. Culture is an invisible until we make it visible. Culture is "who we are, the sum of our beliefs, attitudes, and habits" (Landry 245). Converting manhole covers, certainly one of the most imageable elements of the urban infrastructure, into cultural artifacts that are infused with the history and legacy of a community is an opportunity that cannot be overlooked any longer by placemakers, environmental graphic designers, and urban planners. To do so would allow the bland cookie-cutter approach of creating merely functional elements for the streetscape to continue rather than merging form and function into visual representatives of culture.

Additionally, beyond the scope of this investigation, there is also an opportunity to consider these street hardware elements as wayfinding assets. One of the hallmarks of placemaking is navigation. This correlates with the component of structure in the environmental image. Creating a space that is easy to navigate produces a sense of belonging. This in turn gives the user confidence in the decisions they make and in the environment around them. It is the necessary structure to move through a community correctly. Manhole covers greet people along every sidewalk, making them ideal candidates for wayfinding. Opportunities for further research lie in both traditional navigation of a community and tourism-related navigation. Historical communities have necessarily strict guidelines on traditional signage, but manhole covers, functional elements of the street, could easily be utilized, to create a structure of navigation for

users. This could be achieved either through the visual design of the cover or through the implementation of technology. If beacons were embedded into the manhole covers, entire tours could also become a part of the street, and all the user would need is their smartphone. This leads to the possibilities of augmented reality to show off the assets and values of a community in a digital environment.

The use of the urban infrastructure as a representation of a culture's identity has not been explored to its fullest. Street hardware, the functional elements of the community, are ready and willing participants to the exploration of placemaking. Manhole covers provide a starting point to what should become a fully developed urban landscape that will represent the shared values of the past, the present and the future of a community. These values, brought to life on the street, could give a boost of confidence to the self-esteem and sense of pride that is lacking or wavering in communities that have lost themselves to thoughtless urbanization. Instilling community pride and belonging is precisely what placemaking can accomplish when infusing these elements of the street with the invaluable distinctiveness of each community.

**LIST OF FIGURES**

Figure 1: Manhole Cover with flower pattern. Photo: Diana Stuart


Figure 2: Manhole Cover in Tokyo Prefecture. Photo: Remo Camerota

Figure 3: Manhole Cover in Shizuoka Prefecture. Photo: Remo Camerota

Figure 4: Stumbling Blocks outside a home in Berlin, Germany. Photos: Gould and Silverman


Figure 5: Manhole Covers in two sizes. Photo: Shawna Mansfield

Figure 6: Manhole Cover with vault lights. Baltimore, Maryland. Photo: Robert Melnick

Figure 7: Manhole Cover with tic-tac-toe pattern. Brooklyn, New York. Photo: Diana Stuart


Figure 8: Manhole Cover with Victorian pattern. Quincy, Illinois. Photo: Robert Melnick

Figure 9: Seattle map design on manhole cover. Photo: David B. Williams

Figure 10: Tlingit Whale design by Nathan Jackson. Photo: Russel Muits

Figure 11: Manhole Cover in Milan by Versace. Photo: Sergio Caminata


Figure 12: Manhole Cover depicting *Tale of the Bamboo Cutter*. Photo: Remo Camerota

Figure 13: Manhole Cover in Orlando, Florida. Photo: Shawna Mansfield

## APPENDIX A: VISUAL THESIS EXPLANATION

The development of ideas for the visual thesis exhibit led to a multifaceted approach of gathering information and imagery from a vast variety of individuals. Delving into Facebook groups, contacting Instagram accounts, searching through Flickr, and contacting bloggers were the main avenues used to connect with people for this exhibit. Submissions were funneled through the thesis website using forms that allowed for structured data collection, signatures, and attachments.

One arm of the exhibit celebrated the culture of a community that had been wiped out of existence in the heart of Gainesville, Florida. After gathering memories in words and images from people who use to be a part of the culture on the NW corner of 13$^{th}$ Street and University Avenue, the goal of the exhibit was to compose a documentary style wall which celebrated the sense of place which was once there and challenge how the lost culture and place could still be represented in the current structures.

Another arm of the exhibit focused on manhole cover designs and the places they can be found. Photographs of these covers, curated and composed, were printed larger than life and allowed the exhibit attendee to visually engage in the shapes, typography, and textures. A portion of the selected images focused on the locale around the manhole cover.

It was of importance that the people who came to see the exhibit were allowed to voice their opinions and thoughts since the crux of this thesis is based on the shared values found in neighborhoods and the people. This led to the inclusion of two reaction walls in the exhibit. One as a reaction to the documentary wall about downtown Gainesville and the other provided an opportunity for individuals to share their thoughts on the values that make up their community.

The next arm of the exhibit involved borrowing actual manhole covers as display elements for the exhibit. Covers were on loan to the exhibit from the City of Gainesville Public Works Department and Florida Department of Transportation. Cubes were constructed to be able to hold the 300+ pounds of some of the covers. Materials were provided for visitors to create their own rubbings of the manhole covers. Additionally, vinyl photo prints of manhole and handhole covers were scattered about the exhibit floor – causing some attendees to watch their step because the application felt so real.

Another facet of the exhibit involved two collaborations with local creatives. Working with their skillset to create an outcome that reflected both a sense of place, as with the film collaboration with Wes Lindberg, and a celebration of culture, as with Josh Huey's screen printing collaboration.

Lastly, a global collaboration was achieved through the various connections made with manhole cover enthusiasts around the world. With over 230 submissions, and designs that span the spectrum from bland to intricate, from simplistic to meaningful, the result was an intriguing glimpse into how communities in a variety of locales may see an opportunity for urban infrastructure to serve as cultural artifacts.

In the end, the visual exhibit focused on the three main hallmarks of this thesis topic: Manhole Covers, Cultural Artifacts, and Sense of Place. Making the exhibit engaging on many levels should cause visitors to find themselves reevaluating the functional elements of the street and giving newly found consideration to the potential they hold to represent culture.

## APPENDIX B: VISUAL THESIS PROCESS

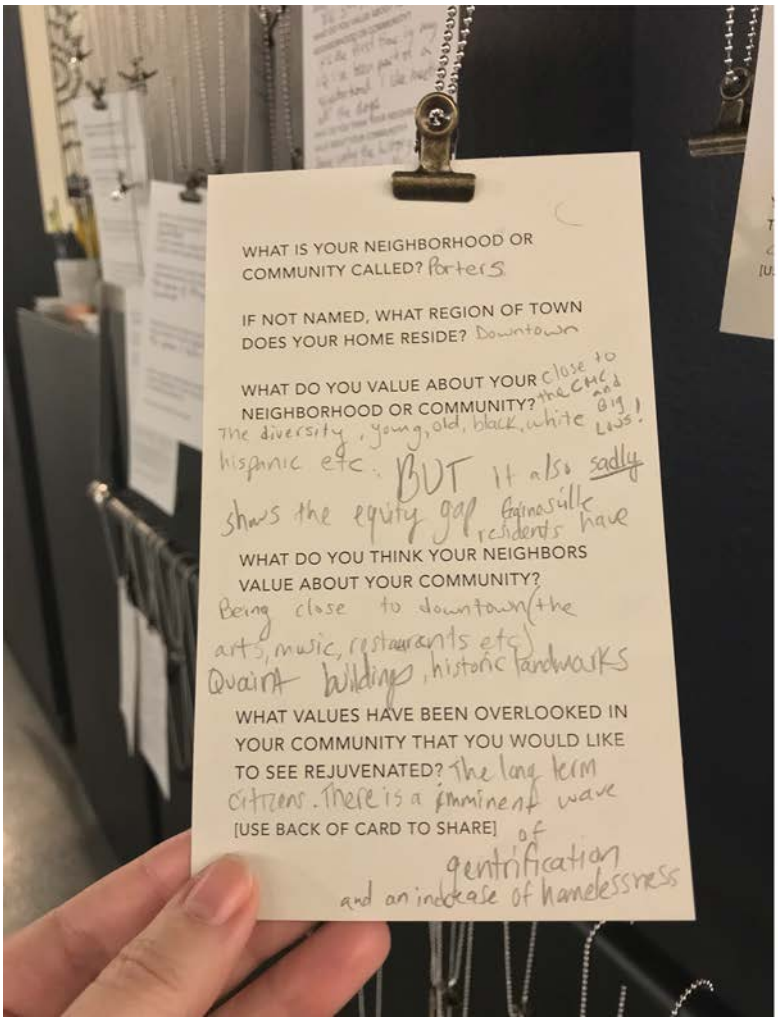


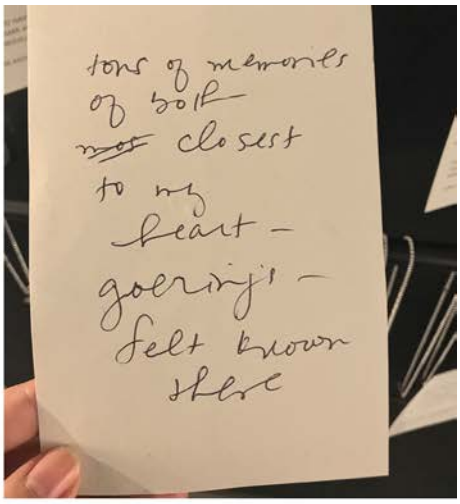
## APPENDIX C: VISUAL THESIS EXHIBIT

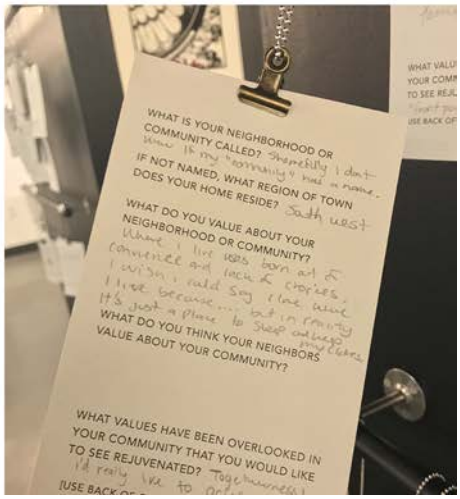

SHAWNA MANSFIELD
THE MARRIAGE OF THE PHYSICAL SPACE OF A COMMUNITY AND THE EMOTIONAL VALUE OF THE PEOPLE IN THAT COMMUNITY, IS INVALUABLE IN ESTABLISHING AN AUTHENTIC SENSE OF PLACE.
MANHOLE COVERS
CULTURAL ARTIFACTS
SENSE OF PLACE


REACT TO THE UNIVERSITY AVENUE & THIRTEENTH STREET DOCUMENTARY WALL
WHAT DO YOU VALUE ABOUT YOUR NEIGHBORHOOD?


PHOTOGRAPHER
Ben Wargo
COVER LOCATION
Coney Island
Brooklyn
New York
USA


WHAT IS YOUR NEIGHBORHOOD OR COMMUNITY CALLED? Porters
IF NOT NAMED, WHAT REGION OF TOWN DOES YOUR HOME RESIDE? Downtown
WHAT DO YOU VALUE ABOUT YOUR NEIGHBORHOOD OR COMMUNITY? close to the CHC and Big Lots! The diversity, young, old, black, white hispanic etc. BUT it also sadly shows the equity gap, Fayetteville residents have
WHAT DO YOU THINK YOUR NEIGHBORS VALUE ABOUT YOUR COMMUNITY? Being close to downtown (the arts, music, restaurants etc) Quaint buildings, historic landmarks
WHAT VALUES HAVE BEEN OVERLOOKED IN YOUR COMMUNITY THAT YOU WOULD LIKE TO SEE REJUVENATED? the long term citizens. There is a imminent wave of gentrification and an increase of homelessness
[USE BACK OF CARD TO SHARE]


tons of memories of both
~~not~~ closest to my heart -
goering -
felt known there


WHAT IS YOUR NEIGHBORHOOD OR COMMUNITY CALLED?
IF NOT NAMED, WHAT REGION OF TOWN DOES YOUR HOME RESIDE? South West
WHAT DO YOU VALUE ABOUT YOUR NEIGHBORHOOD OR COMMUNITY?
WHAT DO YOU THINK YOUR NEIGHBORS VALUE ABOUT YOUR COMMUNITY?
WHAT VALUES HAVE BEEN OVERLOOKED IN YOUR COMMUNITY THAT YOU WOULD LIKE TO SEE REJUVENATED?

## APPENDIX D: VISUAL THESIS PRESENTATION

Link to video file: Google Drive

https://drive.google.com/file/d/1PDd95PF-CgiLQirIC0ujXyPhNKL6xi1w/view?usp=sharing

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