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EXECUTIVE SUMMARY

s part of Resilient Communities Project Scope of Work Agreement #RCP 2012-7a, a team of student researchers at the University of Minnesota conducted an analysis to determine potential market niches that the North Saint Paul community could develop in order to strengthen the competitiveness of the downtown area. As the City of North Saint Paul moves forward in line with the community's 2008 vision of developing a "futuristic or progressive" image in redevelopment areas while maintaining a sense of its past," it is critical that the community utilize existing assets in a way that connects the past to the future in a practical and meaningful way. Therefore, the student team recommends that North Saint Paul pursue the development of market niches focusing on the city's heritage, present opportunities, and future possibilities. Our recomendations strive to leverage North Saint Paul's unique attributes to maintain a competitive position, not only in terms of downtown retail activity, but in terms of establishing a truly unique sense of place that is driven by high-wage jobs and quality of life.

WHAT IS A NICHE?

Generally speaking, there are two broad types of niches. An *existing* niche is when a significant number of downtown businesses within a certain market segment are already located there. Existing niches can be nurtured in a variety of ways in order to strengthen the competitive advantage of a business cluster. A *potential* niche is a market segment for which market opportunity exists but businesses within that segment have not yet located in North Saint Paul. Businesses within this category can be recruited in order to fill a market need and drive more customers to the downtown.

METHODOLOGY AND APPROACH

In order to identify market niches, the research team utilized a variety of methods. A downtown inventory of businesses, property, and buildings was conducted in order to identify existing niches where a significant number of downtown businesses within a certain market segment already exist. This data additionally allowed for analysis of the spatial distribution of businesses and attributes of the built environment in order to inform recommendations

regarding potential market niches and other downtown revitalization strategies. Data on retail market supply and demand within various market segments informed the analysis of both existing and potential niches. In addition to these data tools, a number of other criteria were included in order to narrow down the existing and potential niches that the city can focus on.

In general, the team required that proposed niches be either retail-oriented or complementary to retail businesses. In a downtown landscape that is characterized by a unique mixture of industrial, warehouse, and retail-oriented land uses, this strategy allowed the research team to recommend market niches that build on local assets and make use of existing strengths. This leads to a set of niches that not only fill gaps between market supply and demand, but that add to the unique sense of place that makes North Saint Paul attractive to residents and visitors. Ultimately, this should give North Saint Paul a competitive edge by creating a downtown environment that is interesting to visit, and contributes to a quality of life that attracts new residents and businesses.

SUGGESTED NICHES AND RECOMMENDATIONS

Past: A City Proud of its Past

The community of North Saint Paul should leverage its existing cultural resources to connect the city's past with its present in a way that creates new opportunities and strengthens existing market niches. The cultural heritage of North Saint Paul is an integral aspect of its community life—part of the community's vision is "maintaining a sense of the past."

Antiques: Strengthen the existing antiques niche within downtown North Saint Paul. There is an existing cluster of antiques and used merchandise retailers and dealers in the downtown. There also exists a greater demand than supply of used merchandise within the surrounding area, indicating that people are purchasing more used merchandise outside of the area than in North Saint Paul.

Classic Cars: The social and professional networks established by the History Cruzers Car Show provide a valuable potential market opportunity to attract specialized businesses that cater to classic car collectors and enthusiasts.

Museums and Cultural Resources: The presence of two museums in downtown North Saint Paul provides an opportunity to leverage the social capital stored within those institutions to create truly unique events and programs which connect the city's heritage to its present.

Present: A City in Transition

As the city moves toward its "progressive future," it will be necessary to capitalize on existing opportunities to repurpose industrial, warehouse, and underutilized spaces in a way that generates vibrant activity and complements retail businesses in the downtown. The preservation of industrial land uses is important because industrial businesses efficiently generate tax revenue and provide high-wage jobs in comparison to retail and other land uses. We envision the development of two particular industries, as well as a set of strategies for activating underutilized spaces, which would take advantage of the downtown's unique assets while complementing other market niches:

Microbreweries: As a growing industry in Minnesota and the United States, microbreweries provide an opportunity to fill market opportunities in retail food and alcoholic beverage sales while generating high-wage jobs, growth potential, and taking advantage of existing warehouse spaces.

Woodworking: Woodworking and furniture making are high-wage industries with relatively low barriers to entry which would complement the existing antiques niche by providing opportunities for antiques refinishing and for retail sales of products that may have cross appeal with antiques customers. Woodworking could additionally take advantage of existing manufacturing industries in North Saint Paul by tapping into their supply chains and by re-using left-over materials to create environmentally-friendly products.

Activating Underutilized Spaces: There are several strategies that the city could pursue to activate vacant parcels or vacant buildings in order to bring more activity to the downtown. In particular, a business incubator could provide opportunities for small entrepreneurs to start and grow their businesses in North Saint Paul, and tactical urbanism could activate underutilized outdoor spaces to meet community and market needs.

Future: A Green Tomorrow

North Saint Paul can move toward a progressive branding of the downtown by focusing on clean energy and sustainable initiatives. Such a brand could provide an effective means by which North Saint Paul businesses may compete with nearby retail centers along White Bear Avenue and at Maplewood Mall. By continuing to invest in clean energy

and sustainable bicycle and pedestrian infrastructure and initiatives, North Saint Paul can build on its current assets while moving toward a truly unique position for a suburban city in the east metro.

Expansion of Wind and Solar Power: It is recommended that North Saint Paul continue to leverage its local energy utility to expand wind and solar power infrastructure in the downtown area. A properly organized and funded energy retrofitting program could incentivize businesses in the downtown to adopt wind and solar power solutions that feed back into the energy grid and reduce the cost of electricity for everyone in North Saint Paul.

Invest in Bicycle Infrastructure and Culture: The Gateway State Trail is a significant regional asset that can be utilized to build upon the image of North Saint Paul as a leader in sustainability and clean energy. By providing better way-finding, by connecting infrastructure, and by encouraging businesses to market to bicyclists, the community can capitalize on this asset to drive more bicycle traffic to the downtown.

By pursuing a variety of niche strategies focusing on moving North Saint Paul toward a progressive future while capitalizing on its assets, the community can make downtown North Saint Paul a truly unique destination capable of competing with regional retail centers such as Maplewood Mall. Short and medium-term strategies include strengthening the value of existing cultural resources and an existing antiques niche, while pursuing new industries that take advantage of industrial and warehouse space, create high paying jobs, and complement downtown retail activity. In the long-run, the city can encourage greater patronage of downtown businesses by fostering an image and culture based on sustainability and clean energy. Taken together, these strategies will create a unique downtown experience—one that is at the same time rooted in North Saint Paul's heritage, makes the most of a unique and valuable mix of land uses, and pushes the city toward a progressive, sustainable future.

BUSINESS INVENTORY

A MAINSTREET APPROACH

n analysis of the spatial distribution of businesses and Ainstitutions in North Saint Paul reveals several opportunities to both strengthen the downtown core and provide infill development that would complement North Saint Paul's existing assets. First, the relocation and collocation of some of the healthcare and social assistance services within the downtown area could open up considerable space for retail and services that generate pedestrian traffic and strengthen the downtown retail core. Second, a spatial gap is present between existing and proposed retail and commercial districts along the eastern portion of 7th Avenue between Charles Street and Century Avenue. In this area, the density of businesses that serve pedestrians is quite low, creating a barrier between retail nodes at Margaret Street and Century Avenue. Due to the unique availability of adjacent under-utilized, vacant, and industrial space, specific industries could be pursued which would complement the pedestrian orientation of the eastern segment of 7th Avenue. Finally, the heavily industrial area in the northwest corner of the downtown area near the intersection of McKnight Road and Highway 36 should be redeveloped into more intensive industrial uses that create jobs.

SUMMARY OF BUSINESS INVENTORY

The business inventory was conducted on Friday, September 20, 2013 between 8:00 AM and 2:00 PM. Five team members walked through the downtown area (Figure 1) and made observations about businesses and the built environment. See the appendix for complete results of the business inventory. One hundred and thirty-two separate observations were made, and one hundred and twenty businesses were placed into their North American Industrial Classification System (NAICS) four and six digit category codes. Vacancies and other important observations were noted when observed. The data were cleaned and geocoded, and an interactive online map was created to aid team members and North Saint Paul staff in further analyzing the spatial distribution of retail and other businesses in the downtown area.



Figure 1 - Downtwon Saint Paul Study Area (ArcGIS Online)

There is a great diversity of business types within the downtown area of North Saint Paul, making North Saint Paul relatively unique for a smaller suburban city. While the largest category of businesses in North Saint Paul is "Other Services," this is the case due to the presence of a variety of personal care establishments, including hair salons. These types of businesses are appropriate for a downtown neighborhood since they serve the daily needs of people in nearby residential areas. Not surprisingly given the pedestrian and retail-oriented section along 7th Avenue near Margaret Saint, retail (18; 15%) and accommodation and food services (15; 13%) make up a large number of North Saint Paul's existing businesses (see appendix).

Another reason that North Saint Paul is relatively unique for a small suburban city is that it also has a large number of manufacturing (15; 13%), construction (6; 5%), and wholesale trade establishments (4; 3%). These are likely to be complementary industries to one another, especially given the close relationship between construction and manufacturing of sheet metal and roofing materials. The team also noted a variety of medical and scientific equipment manufacturing companies. Given the strong presence of healthcare and social assistance establishments

(17), these are likely complementary as well. A challenge will be reconciling any land use conflicts between retail, service, and manufacturing land uses to create vibrancy without pushing successful industries out.

Some business segments are under-represented, and this was confirmed by the open house feedback gathered on Thursday, October 17, 2013. In particular, only three full-service restaurants were identified, and limited-service eating establishments do not provide particularly diverse offerings. The only arts, entertainment, and recreation establishments consist of two martial arts academies and two museums. Aside from a handful of restaurants and bars, there are very limited entertainment offerings for adults and families, particularly during the evening and weekend hours. North Saint Paul is also lacking a grocery store. While the community's primary grocery needs can probably be fulfilled by retail centers along White Bear Avenue in Maplewood, a smaller convenience-oriented grocery store would enhance quality of life and help make downtown North Saint Paul a more diverse retail destination.

RETAIL DENSIFICATION IN THE **DOWNTOWN CORE**



Figure 2 - Healthcare and Social Service Business Locations (ArcGIS Online)

Healthcare and Social Services

Some of the healthcare and social assistance organizations might be relocated or collocated in order to open up space for pedestrian-oriented retail and services in the downtown core. Medical and social assistance organizations make up a significant percentage of the inventory (14%) and are relatively spread out across the downtown diversified district (Figure 2). Some of these businesses might be consolidated in space that is available in or near the Entira Family Clinic at 2601 Century Drive, or at 2586 7th

Avenue. Both of these facilities offer new office space that could be seen as valuable to health care providers who demand high quality facilities and services for their patients. Collocation of healthcare providers can additionally offer opportunities for greater referral business among complementary specialties, and can also increase the quality of care (Guevara et al., 2009). Collocation of complementary medical practices could aid in the city's goal to compress retail into the downtown core by opening up some storefronts along 7th Avenue and Margaret Street for retail and dining establishments (P. Ammerman, Personal Communication, 20 September 2013).

Retail and Pedestrian Oriented Services Gap



There is a low density of retail businesses on 7th Avenue between the core retail district near Margaret Avenue and Century Avenue (Figure 3). This arrangement makes pedestrian connections and building a sense of place more difficult.

The density of businesses between Charles Street and Century Avenue could be increased by attracting businesses and industries that serve new potential markets and take advantage of North Saint Paul's existing assets and opportunities. The North Saint Paul Redevelopment Master Plan calls for adaptive re-use of the Berwald Roofing site and light industrial, office, or show-room uses to the east of Berwald and west of Century Avenue (City of North St. Paul & Hoisington Koegler Group, Inc., 2012). To the extent possible, these uses should complement retail and services oriented toward pedestrians along 7th Avenue in order to fully connect the pedestrian corridor between Charles Street and Century Avenue. There are several pedestrian-oriented businesses that begin to fill the gap between Charles Street and Century Avenue. However, they are sparse. These include: The North Star Museum of Boy Scouting and Girl Scouting; the Museum of North

Saint Paul Historical Society; Anchor Bank; Bakken Wood Hair Studio, Subway, and the American Legion. Pursuing specific types of industries that capitalize on the availability of underutilized, vacant, and industrial space in the area between Margaret Street and Century Avenue could provide opportunities to create high paying jobs for North Saint Paul residents while generating foot traffic to support retail, food, and accommodation services that exist near Margaret Street and which are planned at the corner of Century and 7th Avenues.

Vacant and Underutilized Buildings and Land

Vacant space and closed business locations should be targeted for new retail and services, and in some cases (as previously mentioned) for relocation of existing establishments within the downtown. Vacant space and closed businesses were found to be clustered in the downtown core between Helen Street and Charles Street, and near Margaret Street along 7th Avenue. For purposes of this inventory, vacant space is defined as an existing building that was identified as either partially or fully vacant. Eleven separate address locations were identified as having at least some vacant space available. While square footage information was difficult to estimate, it was confirmed that approximately 14,000 square feet of vacant office space exists in the three story building at 2586 7th Avenue (Personal Communication, R. Dew, 15 Oct. 2013). As will be discussed later in this report, North Saint Paul should fill these vacancies by working to strengthen existing niches such as antiques retail, and should explore new markets which take advantage of the unique mixture of land uses near the downtown. New markets which would complement North Saint Paul's retail mix may include craft brewing, specialty food manufacturing, woodworking, furniture making, and visual arts.

The team also noted that there is a significant amount of under-utilized space in the downtown area of North Saint Paul. Some of the under-utilized land is devoted to parking, while other land is completely vacant. There are particular concentrations of such land at the far western end of downtown between McKnight Road and 3rd Street, but also along Helen Street and in the area just north of the previously identified area of low business density between Charles Street and Century Avenue. As will be discussed in the "City in Transition" section of this report, our team found compelling reasons to repurpose existing industrial resources rather than pursue redevelopment in the near term.

PAST

A CITY PROUD OF ITS HERITAGE

ANTIQUE RETAIL

The cultural heritage of North Saint Paul is an integral aspect of its community life. As stated in the city's 2008 vision statement, though North Saint Paul aims to redevelop its downtown with an aim towards the future, it is imperative that it does so while "maintaining a sense of the past" (City of North Saint Paul, 2008). Strongly incorporating a sense of the past into its revitalization efforts is not only a strategy appealing and agreeable to the community of North Saint Paul. It is also a very sensible one. According to a Brookings Institute publication, the most important asset of a revitalization process is the memory and the emotion it unleashes (Leinberger, 2005). By significantly integrating the community's past in its revitalization efforts, North Saint Paul is positioning itself well for success as it attempts to revive its downtown.

One way to translate this emphasis on the community's past into development efforts is through markets that speak to the history of North Saint Paul and to history in general. Antique retail is a market that does just that, as the very nature of the antiques industry pertains to the past, and as the industry has long been part of North Saint Paul's retail community. Currently, there are four antique retail stores in the downtown. With a small, yet strong presence, antique stores are an established niche market in North Saint Paul that can significantly contribute to the future of the downtown area.

At the Resilient Communities Project meeting held earlier this fall, attendees from the community considered the antiques stores some of their favorite retail establishments in the downtown. The student team agreed, believing that the antique stores should be an essential component of revitalization efforts. We believe that the antique retail market should be expanded in North Saint Paul, as it both currently has a strong presence and as expansion of the industry could reduce present gaps in local supply and demand. A strong antiques market would be also compatible with both existing industries in the downtown area, and those proposed by our team. Here we provide a basic synopsis of the antique industry and explanation for expanding the antique industry in North Saint Paul.



Downtown North Saint Paul

Antique sales is a multi-billion dollar a year industry (Lindberg & Vaugh, 2004). Over 145,549 people currently are employed in the United States in used merchandise sales, under which the antique industry is categorized. Though the industry has a smaller presence in Minnesota, it continues to grow. The number of people employed in used merchandise has increased by 27% over the past five years, rising to 3,258 employees in Minnesota in 2012 (Minnesota Department of Employment and Economic Development, 2013).

As with all businesses, there are certain topics that should be addressed when examining the viability of an antiques store (Lindberg, 2004). The first is to decide whether the area can support the proposed business. An analysis of market supply and demand for used merchandise conducted by our team provides strong evidence that additional antique stores could be supported by North Saint Paul

and the surrounding area for two main reasons. The first reason is that there is a strong antiques retail presence already established in the downtown. This clustering of antique stores on 7th Avenue provides a market surplus of antique retail sales in North Saint Paul, meaning that customers from outside the trade area are drawn into it.

The second, and perhaps more compelling reason, is that quite a substantial amount of market leakage in used merchandise exists in the trade area. There is over \$1.1 million in unmet demand for used merchandise within a ten minute drive of North Saint Paul and nearly \$7.2 million in unmet demand within a fifteen minute drive (ESRI, 2013). The combination of an existing surplus in the downtown and significant unmet demand in the five and ten minute drive time areas is especially important, as it allows North Saint Paul to play both to its own strengths and to the weaknesses of surrounding areas. When viewed in conjunction, these two conditions provide North Saint Paul with an excellent opportunity to expand its antique niche and improve its downtown. With North Saint Paul already drawing people from outside the trade area, an expanded antique retail presence in the downtown would allow North Saint Paul to capture some of this unmet demand and strengthen its identity as an antiques destination.

Another element to consider when addressing the viability of a business is the level of competition in the area. As the ESRI data reveals, there are millions of dollars in unmet demand in areas within the ten and fifteen minute drive times of North Saint Paul; there is little competition in those areas. But what about within the downtown? Currently, several antiques stores are in business along 7th Avenue. Would additional antique stores, introduced to meet the unmet demand, be disadvantageous to those already in the downtown? Fortunately, additional antique establishments most likely would not have a detrimental effect on existing business. In fact, the antiques industry is unique in that it actually benefits from the collocation of businesses. Though antique dealers may be selling similar items, they are not the same items. It is this small, yet significant distinction that often attracts collectors to the antiques scene in the first place (Packer, 2012).

The flexible nature of the antiques industry also allows for its expansion in downtown North Saint Paul. Unlike certain industries, antique retail does not require buildings of a certain size. Rather, the amount of square footage required is completely dependent on the type of merchandise a retailer sells and the amount of inventory she holds.

ANTIQUE RETAIL CASE STUDY: WAYNESVILLE, OH THE ANTIQUES CAPITAL OF THE MIDWEST

Vaynesville, Ohio is commonly touted as the "Antiques Conital and I are in the control of the co tiques Capital of the Midwest." Despite its size, this village of 2,834 residents in Warren County has become a mecca for antique aficionados (U.S Census Bureau, 2013). Within driving distance of five large metropolitan areas, Waynesville attracts patrons from all over the state and the country to its downtown antiques market. With more than twenty-four antique shops, eighteen specialty stores, two art galleries, and nine food and lodging establishments, Waynesville has been able to offer its visitors unique shopping, dining, and lodging experiences (Milder, 1997). Part of Waynesville's success is due to its ability to provide visitors with this combination of services. By having dining and lodging establishments in close proximity to the antiques market, Waynesville is able to capitalize on visitors remaining in the downtown area for longer, uninterrupted periods. The longer visitors remain in the downtown, the more likely they are to spend their money in antiques stores and other establishments. For example, if visitors are able to find lodging in the downtown, the more likely they are to patronize restaurants there as well.

Another reason for Waynesville's successful antiques market is the Waynesville Antique and Merchant Advertising Association. This association of business owners, formed in 1972 and still in existence today, has greatly contributed to the continued success of the antiques retail market. Though strictly composed of volunteers, the association still manages to spend nearly \$20,000 a year on advertising. All monies directed toward any advertising are from voluntary contributions and benefit all of the association's members (Milder, 1997).

The association directs funding to traditional marketing methods, like billboards and newspaper and antique periodical advertisements. It also provides funding for more customary advertising methods, like the publication of an antiques directory (Figure 4). The directory, which is distributed in all participating shops, clearly identifies the names and locations of member establishments. Funding is also dedicated to an annual antiques show held in the spring and to Christmas in the Village, an event that extends throughout the month of December (Waynesville Shops, 2013).

The Waynesville Antique and Merchant Advertising Assosition know that if they are to be successful they must be

able to reach a much larger market (Milder, 1997). In order to do so, they have marketed Waynesville as a real destination: a place both capable of attracting customers from significant distances and offering them a wide array of goods and services. The association is an excellent example of how organized behavior can encourage the success of a niche market, especially one constituted around highly

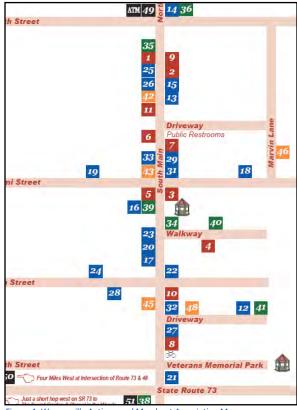


Figure 4- Waynesville Antique and Merchant Association Map (Association website)

specialized merchandise. Such cooperative behavior simply reinforces the idea that Waynesville is a destination and allows for further marketing as such. Fortunately, the conditions that have perpetuated the success of Waynesville's niche antique market are either easily transferable or already exist in North Saint Paul. In close proximity to the Twin Cities metro area, and within driving distance from Madison and Milwaukee, North Saint Paul is well situated. Because of its central location, it is easily accessible to patrons from a much larger market area. That North Saint Paul is positioned along a highway, as is Waynesville, provides easy and direct access to the community as well. Because of its existing antique market, its walkable downtown, and its prime location, among other conditions, North Saint Paul has the potential to become a true antiques destination. If it were to expand its antiques presence with additional shops, bring restaurant and lodging establishments to the downtown, and strengthen its business association, it could really capitalize on its antiques niche potential, as Waynesville has done successfully.

LEVERAGING HISTORY AND **CULTURAL RESOURCES:** MUSEUMS & CLASSIC CARS

North Saint Paul has the potential to leverage its history and cultural resources to drive economic development. In particular, the city's museums, as well as the annual History Cruzers Car show, can serve as assets which complement existing and emerging market niches, while building upon the community pride associated with the city's past and filling a community need for entertainment and recreation. We see an opportunity to utilize the networks established by the car show to tap into unique markets for goods and services that contribute to the local economy and sense of place. Additionally, while the community may lack significant entertainment venues such as theaters or full-service restaurants, North Saint Paul does have two museums. The city could foster strategic partnerships

with such institutions to increase the capacity of the community to market a vibrant image by promoting local goods and services. We see this as consistent with the goal of maintaining a sense of the community's past while allowing North Saint Paul to strive for a unique, interesting, and vibrant future.

The Importance of Cultural Assets for Economic Development

inventory, market profile,

and the RCP open house reveals that the city lacks entertainment opportunities that contribute to a sense of community pride. Among those businesses or organizations classified within the arts, entertainment, and recreation categories, there are two museums and two martial arts academies, representing only 3% of all businesses in the North Saint Paul downtown area. Similarly, there are only three full-service restaurants. Community members who provided feedback during the RCP open house noted a lack of family-oriented options for entertainment and dining.

Many of those who suggested that new restaurants were needed stipulated that they should not be chain restaurants, but rather that they should be relatively unique places of which the community can be proud. The retail marketplace profile for North Saint Paul confirms that there is a market leakage for full service restaurants within both a five and ten minute drive from downtown (ESRI,

2013). Full-service restaurants are used in this scenario because they are a proxy for entertainment assuming that people often go out to full-service restaurants for fun as well as nourishment.

The connection between the the lack of entertainment options described above and the need for cultural resources as a component of economic development is not straightforward. Cultural resources such as museums, historical societies, and festivals play a valuable role in contributing to a community's sense of ownership over its revitalization efforts and image development. The networks built by cultural organizations can be tapped into in order to recruit new businesses to produce unique goods and services. New partnerships can be formed to allow arts, cultural, and historical organizations to play a role in adding value to unique goods and services produced by new and established businesses in North Saint Paul (Singer, 2000). This provides the opportunity for the community to have fun by engaging with new markets and services through the institutions that they know and care about. The key is to think creatively about the cultural institutions which exist, and how they can contribute to local economic development.

The remainder of this section will discuss creative ways that North Saint Paul's existing cultural assets can be leveraged to connect the past with the present, bringing people together around new and emerging markets in fun, exciting, and entertaining ways.

Classic Cars

The annual History Cruzer's car show is one of North Saint Paul's most well-known cultural institutions. Visitors travel to North Saint Paul to see vintage car enthusiasts from around the state show off their hotrods. We believe that the city

can use the car shows to leverage new cultural connections as well as to support complementary industries.

The History Cruzers Car shows are a potential resource for community engagement and development. The organization publishes a website (http://www.historycruzer.com/) and a newsletter that advertises for the car show, provides a market for classic car parts and business opportunities, and provides information about special events run by History Cruzers through their partnerships. At the time of this writing, the website is promoting a Holiday dance, a monthly breakfast, and an art installation related to the VFW memorial proposed for North Saint Paul. For instance, the History Cruzers are connected to a group of organizations responsible for supporting the show, including a number of car clubs that operate at the North Saint Paul event and venues such as the Back to the Fifties car event at the Minnesota State Fair. The network of organizations



An analysis of the business (http://farm6.staticflickr.com/5141/5822039120_6812e650b7_o.jpg)

of common interest associated with the car show could be tapped to support community driven business improvement district initiatives.

In addition to building institutional connections, the classic car shows could diversify its offerings to include other emerging niches. For example, Artscape in Baltimore bills itself as "the largest free arts show in the country" and includes an Art Car Show. The art cars are vehicles of all makes and vintages decked out in paint and accessories and act as mobile pieces of public art. This year for the first time, the Art Car Show is partnering with local cycling groups who can ride along (Artscape, 2013). Incorporating elements of the arts and cycling could help diversify not only the attendees, but could be a way for local artists to showcase their work in front of a large audience and demonstrate to the region that North Saint Paul is a bike-friendly community (Artscape, 2013).

Through our retail market analysis we discovered that within each market area around North Saint Paul there exists market leakage in the area of auto parts retailers. There is market leakage of at least 10% of total sales in all market areas, which at the 15 minute drive time area amounts to about \$15 million annually (ESRI, 2013). North Saint Paul could capitalize on this gap as well as on its classic car heritage by encouraging complementary businesses like auto parts stores specializing in vintage parts. This cluster could eventually could grow to support a classic car museum which would be an additional historical asset and add to the cluster of museums in North Saint Paul.

Museums

Strategic partnerships can be formed with North Saint Paul's museums in order to provide enhanced entertainment and enrichment opportunities that highlight local goods and services and support local market niches. North Saint Paul has two museums in close proximity to one another on east 7th Avenue. The North Saint Paul Historical Society Museum (NSPHS) is an important institution and champion for community culture and heritage. The other is the North Star Museum of Boy Scouting and Girl Scouting. We suggest several ways that the concept of the walking tour can be expanded upon to support market niches around antiques, industry, and bicycling. We also recommend that museums seek out creative ways to partner with local businesses to highlight the connection between the past and the present.

The historical walking tour is a concept that could be expanded upon to highlight local goods and services within the context of the city's history by forming creative public-private partnerships. The NSPHS is already contributing to local economic development by sponsoring a walking tour that acquaints visitors to the downtown and its history. Walking tours such as this have been expanded in other communities to focus on arts and entertainment (consider the ubiquitous Friday art walk). North Saint Paul is uniquely positioned to pursue creative "tours" that provide entertainment and excitement while highlighting

local businesses in a way that connects the city's past to its present. First, although North Saint Paul may not have a vibrant arts community as traditionally defined, a regular event could be created which capitalizes on the presence of an antiques market niche in North Saint Paul. This would be an event where the community would have the opportunity to visit all of the antiques stores, along with arts and crafts stores, on a weekend evening. Even without a strong presence of full-service restaurants, food could be catered at one or more of the antiques shops, or in underutilized indoor or outdoor spaces, perhaps by K&J Catering. This would provide an opportunity for the kind of family-friendly recreation and dining experience that the community is demanding.

An exceptionally unique, regular event, such as an antiques walk, would additionally complement other emerging market niches in North Saint Paul. If a brewing industry emerges, breweries would complement such a tour by opening their doors to passers-by, or by providing craft brews at the antiques shops. Similarly, if woodworking shops spring up, demonstrations or workshops could educate the public about the craft of woodworking and its historical roots. Such workshops might be supported by cultural institutions such as the North Star Museum of Scouting, as scouts often learn traditional skills such as woodworking. While these opportunities do not directly connect to the history of North Saint Paul, it is important for the community to be able to connect the city's historical and cultural roots in industry with the need for new manufacturing activities that move the city forward in a meaningful way.

Finally, the city could work with the historical society, emerging breweries, downtown businesses, and antiques dealers to create a historical biking tour. This is an exceptional opportunity for the community to build on its history while moving forward into a future defined by clean energy and sustainable transportation. If possible, antiques dealers in North Saint Paul might work together to provide vintage bicycles to use on the tour. A tour leader would highlight the historical aspects of the industrial development of North Saint Paul and the Gateway Corridor. The tour would conclude at a local restaurant, pub, or brewery.

The ideas outlined above highlight how creative partner-ships can be formed between cultural institutions such as museums and various other public and private entities in order to highlight local goods and services while building a local identity that is firmly connected to a unique past. This highlights how existing and emerging market niches can be strengthened by cultural and historical institutions. Perhaps most importantly, these examples show how cultural institutions and events tied to history can fulfill a market and community demand for unique, local goods and services that provide education, entertainment, and dining opportunities for families.

PRESENT

A CITY IN TRANSITION

Goal 1 of the city's 2008 vision notes that "The City seeks a futuristic or progressive image in redevelopment areas while maintaining a sense of the past." North Saint Paul has a lively history that began with the construction of the Wisconsin Central Railway and the industries which sprung up along with it in the downtown corridor (City of North Saint Paul, 2008). As North Saint Paul transitions into a progressive city of the future, it will be necessary to utilize vacant space and repurpose industrial buildings as assets that can activate downtown pedestrian life, provide high quality jobs, and complement existing market activity and community needs.

The student team found that brewing and woodworking are examples of industries which are compatible with North Saint Paul's unique downtown land uses and building inventory. Furthermore, these industries could take advantage of gaps between supply and demand, and would complement existing retail markets downtown. They would help to maintain the industrial base while providing enhanced specialty retail opportunities that drive foot traffic in the downtown area. Finally, activity in the downtown could be amplified by allowing and encouraging temporary uses that activate currently under-utilized space, providing goods and services that are valuable to downtown patrons even without the immediate redevelopment of vacant parcels. All of this would contribute to a market niche that emphasizes North Saint Paul as a city in transition by leveraging the community's lively (and sometimes gritty) history and existing assets to bring life to industrial and under-utilized spaces.

Why Maintain the Industrial Base?

Communities often struggle to recognize the importance of industrial land uses amid increasing pressure to develop vertically mixed, high-density, pedestrian-friendly housing, retail, and office space. In a recent study prepared for the Saint Paul Port Authority, the authors note that industrial jobs provide higher paying jobs for workers with lower educational attainment, with an average \$11 per hour starting pay rate and \$47,000-\$49,000 per year on aver-

age – a figure higher than most other jobs in Saint Paul. The study also finds that industrial land uses subsidize services for residential and other land uses because they generate more net tax revenue than any other land use after accounting for the cost of city services. Residential land requires more than \$1 in city expenditures for every \$1 residential landowners contribute in tax revenue. On the other hand, industrial land requires only \$0.60-\$0.69 in expenditures by the City of Saint Paul for every \$1 raised in tax revenue (ICIC et al., 2012). This shows that industrial land uses contribute significantly to tax base by minimizing service demand while maximizing tax revenue.

As shown by the Saint Paul Port Authority, repurposing industrial facilities by fostering industries that complement existing downtown activity can provide good jobs while subsidizing the services that make North Saint Paul a great place to live. Adaptive reuse of existing industrial space could provide lower-cost opportunities for small or startup businesses that cannot afford the cost or risk associated with larger-scale redevelopment. Particular industries can be pursued which make sense based on North Saint Paul's market characteristics, downtown vision, existing building inventory, and the preferences of local residents.

CRAFT BREWING: CAPITALIZE ON CURRENT LAND USES

Craft brewing is a growing industry that is both scalable and provides living-wage jobs. According to the Brewers Association, craft brewing accounts for 108,440 jobs in the United States. The craft-brewing industry increased its output by 15% in 2012, accounting for \$10.2 billion in

Figure 6 shows a map of downtown North Saint Paul buildings by square footage, and reveals many opportunities for brewhouses of varying capacity. There are several viable sites for a brewery to begin and develop within areas envisioned for light industrial and flex uses in the Redevelopment Master Plan just north of Seppala Boulevard between Margaret Street and Henry Street. One particularly good option could be the Berwald Roofing site, given its interesting architectural detail, historic character, and location in proximity to the downtown retail core. The North Saint Paul redevelopment plan specifically indicates the Berwald site as one that would be well-suited to adaptive reuse (City of North Saint Paul, 2008).

Brewhouse Size	Gas	Electric	Other Require- ment	SF needed if no outdoor storage on site	SF needed if outdoor storage on site
7 BBL	Low pressure (less than 1 lbs.)	400+ amp - 3 phase	½" water meter	7,000 SF	N/A
15 BBL	Medium pressure (5+ lbs.)	600+ amp - 3 phase	1" water	18,000 SF	12,000 SF
30 BBL	Medium pressure (10+ lbs.)	2kva - 3 phase	Multiple high dock doors	18,000-40,000 SF	N/A

Figure 5- Brewhouse capacities (Brewers Association, 2011)

retail sales. In Minnesota, the volume of beer produced grew by 80% in 2012, making it the second-fastest growing state in the country in terms of volume of beer production. During the same time period, the number of craft breweries in Minnesota more than doubled to about 50 (Greder, 2013). A study of the economic impacts of craft brewing by the California Craft Brewers Association notes that craft brewing is labor intensive and provides a healthy source of growing employment in that state. California brewery workers earned more than \$62,000 on average in 2010 (Richey, 2012). While not necessarily representative of wages in Minnesota, this suggests that brewing provides living wage jobs.

The scalable nature of craft brewing makes it a viable option for re-purposing industrial buildings gradually over time. While not every brewery succeeds, it is possible for a brewery to start out very small and grow quickly. Lift Bridge Brewery started in Stillwater, MN in a one-car garage. When the company needed to expand its operations, it moved into a three-car garage, and today occupies an 11,000 square foot building just six years after its humble beginnings (Greder, 2013). A presentation by the Brewers Association at the 2011 Craft Brewers Conference indicates that brewhouses range in size according to output capacity (Figure 5).

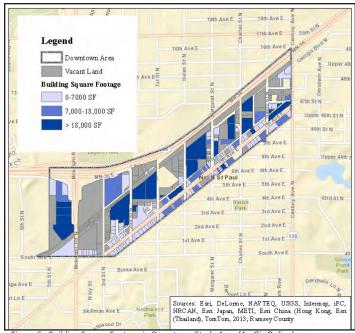


Figure 6 - Building Sqaure Footage in Downtown Study Area (ArcGis Online)

Craft brewing fills an identifiable retail and services need in downtown North Saint Paul. The Resilient Communities Project open house was attended by the student team on Thursday, October 17. Community members suggested that downtown North Saint Paul is in need of family-friend-

ly restaurants, evening and night-time activity, and a place to socialize and interact with people. Minnesota Statute 340A.301 was amended in 2011 to allow municipalities to issue licenses to brewers allowing them to establish on-site taprooms to serve their beer to customers (Roper, 2011). By utilizing food trucks to provide food to patrons, many small craft brewers have been able to offer a unique drinking, dining, and social experience for customers without taking on the risk of having to operate a full or limited service restaurant.

An analysis of market demand and supply for food and alcohol products offers some empirical evidence which suggests that a brewhouse could be supported by North Saint Paul and the surrounding community. There is \$2.8 million in unmet demand for full service eating places within a five minute drive of North Saint Paul (ESRI, 2012). It may be possible to capture some of this unmet demand via a brewhouse tasting room if dining options are provided. A more subtle indicator of demand for a brewhouse may be the substantial market leakage in beer, wine, and liquor store sales. While there is only \$58,539 in unmet demand for beer, wine, and liquor retail sales within a five minute drive of downtown North Saint Paul, there is \$1 million of unmet demand within a ten minute drive, and \$4.5 million in unmet demand within a fifteen minute drive (ESRI, 2013). This indicates that there may be demand for retail sales of beer in cans or growlers by brewers who choose to locate in North Saint Paul.

WOOD WORKING: BRINGING CRAFTS TO DOWNTOWN

As detailed in the previous section, there are many benefits to maintaining a vibrant industrial base.

At the same time it can be problematic to have industrial land so close to a commercial center, as is the case in North Saint Paul. Like brewing, furniture construction and woodworking are another type of business cluster that could complement existing land uses, provide high-paying jobs, and have a retail component to attract foot-traffic to downtown North Saint Paul.

Like brewing, woodworking provides a way to maintain an industrial base, but in such a way that the specialized goods produced could be sold from a retail store front, increasing foot traffic and the vibrancy of downtown North Saint Paul. The process of furniture carpentry could be an attraction in and of itself. Visitors can watch the process

unfold from board to finished piece, and then purchase the completed product in an adjacent showroom.

Woodworking offers a unique opportunity because North Saint Paul has many built-in advantages and ways to leverage the industry. For example, as Anderson Cabinets is already located in the downtown North Saint Paul industrial district, it is possible that new business could take advantage of existing supply chains for wood products and finishing chemicals. This type of cluster can also benefit from the current antiques cluster in the city. Besides furniture making in it of itself, we see an opening for a market for wood refinishing. For example, a family buys an antique dresser from a local business then travels down the street and has the paint stripped and surfaces refinished. They not only purchase the dresser in North Saint Paul, but also employ a local craftsman to restore the dresser to its original beauty.

Woodworking can also be a complement to our suggested "future" environmental-oriented niche. For example, builders could take advantage of palettes and other repurposed wood from local industry. In 1999, over 7.5 million tons of pallets were disposed of, accounting for over 60% of all wood waste produced that year (Paulson, 2001). Businesses like The Wooden Duck in California have taken advantage of this supply of wood by creating unique lines of furniture from reclaimed, fir, teak, and other hardwoods (The Wooden Duck, 2013). Since the wood is being repur-

posed, each piece has its own distinct qualities and history, just like an antique does. These unique items make goods distinct from those mass-produced products that consumers can find elsewhere.

Another source of lumber that fills an environmental need is the use of ash. The Minnesota Department of Natural Resources highlights that responsible forestry and usage of ash, especially around urban areas can help control the



Reclaimed Pallet Wine rack (http://img0.etsystatic.com/000/0/6730811/il_570xN.308197726.jpg)

spread of Emerald Ash Borer. Ash also has the advantage of being less expensive than many other hardwoods, like oak or maple, and is easy to mill, thus providing a potentially economical and environmentally friendly source for lumber (Jacobson & Sorensen, 2010).

Our market analysis also shows that there is significant unmet demand for furniture stores located in the vicinity of North Saint Paul. Within a fifteen minute drive time of Downtown North Saint Paul, there is an estimated \$23 million in demand for furniture that is being met by businesses outside of the area (ESRI, 2013). We believe that a business or businesses that create quality furniture using sustainable means could take advantage of this gap and encourage more local purchasing and act as a draw for customers outside of the region. It would also complement existing niches such as antiques and cabinet-making, while enhancing opportunities for the development of emerging niches such as green energy and eco-friendly manufacturing.

TEMPORARY USES: RE-ACTIVATING PUBLIC SPACES

ny plan or revitalization program takes time to implement and raises an important question about what to do with existing vacant and under-utilized land. It is important to implement strategies for temporary land use activities that help move the city from where it is, to where it wants to be. This involves both activating vacant spaces and using current spaces to support growing industries. The Brookings Institute notes that one of the biggest problems facing downtown revitalization is an abundance of vacant or under-utilized land (Leinberger, 2005). Large surface parking lots and vacant spaces make the environment unfriendly for pedestrians and can create a downward spiral of disinvestment. In order to break the cycle, there are interim uses that the city can utilize in order to active more public spaces. These include short-term, low-cost solutions known as "tactical urbanism," as well as small-business incubator spaces.

Tactical Urbanism

Tactical urbanism is a strategy that seeks to activate under-utilized spaces through small-scale, inexpensive, and creative uses and events. This could include park, food, or art related activities. They have the effect of providing added amenities for residents and reducing the appearance of blight in transitional areas. They can also spur creative ideas for more permanent uses for the space (Arieff, 2012). During one of our site visits to North Saint Paul, our team



Vacant lot in San Fascisco to Biergarten (Arrieff, 2012)

noticed many active dog owners walking their pets and frequenting the pet store located in downtown North Saint Paul. There is a city-owned lot across the street from the post-office as well as a larger vacant lot at the corner of 7th Avenue and Charles Street. With the addition of a fence and a trash can or two, the city can create a makeshift dog park. As these lots are in the heart of downtown North

Saint Paul, frequenters could easily become customers for other downtown businesses. From our observations, the pet owners represented a broad cross section of the population (young, old, men, women, and young families). Thus, a dog park could have the added bonus of improving community relationships and bringing new faces downtown.

Business Incubators

Our proposal includes nurturing industries, both those that connect well with existing sectors and North Saint Paul's history, as well as those that build on new trends and assets. As such, the capital and infrastructure needed to diversify the economy will take public investment in order to identify and support local entrepreneurs. The City of North Saint Paul is one of the largest property owners in the downtown and thus has the ability to shape development and offer incentives to investors and small businesses.

In the context of building a specialized manufacturing base, we would recommend the development of business incubator space in industrial areas of downtown North Saint Paul. A successful business incubator, like those sponsored by the Neighborhood Development Center and Seward Redesign in Minneapolis, provide entrepreneurs with the tools and skills to build a successful business. Figure 9, below, details the kinds and types of resources that an incubator might offer. A city or community development corporation can provide services, spaces, and non-traditional capital in ways that yield new opportunities for small entrepreneurs.

Seward Redesign, for example, provides business incubator space in accordance with its broader mission of revitalizing the Seward neighborhood. Seward is similar to downtown North Saint Paul in that it has a very diverse land use mix, including a large swath of industrial land. Seward Redesign offers reduced rents, low-interest credit through a revolving loan fund, and technical assistance about business development and expansion to small businesses (Landenberger, 2013).

Instead of simply razing all of the industrial buildings and starting from scratch, Seward Redesign recognizes the importance of an industrial base to a community. It also recognizes the need of small businesses for cheap space. As land slated for other uses gets redeveloped, more of the industrial space is rehabilitated and used for incubator space. Redevelopment continues in this gradual fashion so at any given time most of the buildings are being activated in some way. Some land might be redeveloped into residential, while adjacent under-utilized industrial buildings are used for incubator space to encourage local entrepreneurs.

LAND USE CASE STUDY: NORTHEAST MINNEAPOLIS

A successful example of the kind of industrial repurposing outlined above is found in Northeast Minneapolis. Traditionally a working-class neighborhood largely dependent on its sizable manufacturing base, Northeast struggled to weather de-industrialization during the 1980s and 1990s. However, over the past twenty years, the availability of cheap housing and warehouse space has spurred a renaissance. Artists flocked to the low rental prices while new uses related to arts, beer, and specialty food production moved in.

become the fastest growing brewery in Minnesota (Indeed Brewing, 2013). Fulton Brewery also just announced a 51,000 square foot expansion in Northeast which will provide jobs and continue to add to the reputation of the area as a mecca for brewing (Reilly, 2013).

Other sectors of specialty food manufacturing are also growing in the area. Northeast produces a wide-variety of products ranging from barbeque sauce (Triple Crown), mushrooms (Mississippi Mushrooms) and cider (Sociable Cider Werks). All of these add to the fabric of an area that seeks to diversify its economy and make use of its history while expanding in new and innovative ways.

North Saint Paul can take cues from the way that Northeast has leveraged its land, people, and history to create a vibrant community without starting over from scratch and using its industrial past to forge a new and exciting future. It might be commonly thought that industrial land uses



Saint Anthony Main Northeast Minneapolis (http://www.davidabele.com/images/neighborhoods/11162315598.jpg,

Today, Northeast Minneapolis is a thriving arts district home to "over 400 galleries, studios, and artist-filled buildings" (Northeast Minneapolis Arts District, 2013). In 2003 the city of Minneapolis named the area an official Arts District. The area has benefited from flexible industrial zoning categories (similar to North Saint Paul's Downtown Diversified district) in order to provide versatile, inexpensive spaces that incorporate production, retail, and living spaces for artists (Maleitzke, 2007).

One of these complementary industries that is leading the way is brewing. In Northeast Minneapolis today there are three commercial breweries and the state's first co-op brewery. Two large brewery expansions are also on the way (Brandt, 2013). Indeed Brewing, founded in Northeast in 2011, has just announced a second expansion that would have them move into a 13,000 square foot facility effectively doubling their capacity and helping them to

are incompatible with retail, residential, and other uses typically pursued in downtown areas. However, Northeast shows how industrial lands can contribute to a unique sense of place while complementing the need for walkability, mixed uses, and retail within commercial districts.

FUTURE

A GREEN TOMORROW

Within the last decade there has been major growth in investments in green initiatives throughout the United States. A Brookings Institute report highlighted that between 2009 and 2014, the federal government will

spend over \$150 billion in grant funding for renewable energy projects (Hargreaves, 2012). Some of the major renewable energy initiatives include the development of solar and wind energy, business retrofitting, and green energy education. Beyond providing the community with an improved quality of life through cleaner air, such green initiatives are also economically lucrative as they provide high income employment through research and development, manufacturing, construction, and installation processes. The city of North Saint Paul has the ability to capitalize on existing infrastructure such as the Gateway State Trail and the city's wind turbine as well as supporting new solar initiatives to support a future focused on sustainability. Green en-

ergy and sustainability could also be included in an effort to "brand" the city in order to support homegrown businesses that can be accessed via bicycle or walking by both residents and visitors alike. Such a brand could provide an effective means by which North Saint Paul businesses may compete with nearby retail centers along White Bear Avenue and at Maplewood Mall.

RENEWABLE ENERGY

Wind Energy

North Saint Paul has made considerable steps in the promotion of renewable sources of energy. With the imple-

mentation of the Hometown Wind Power project and the installation of a wind turbine, North Saint Paul is already creating a name for itself in the area of clean energy (City of North Saint Paul, 2013). One year after its installation, it

was reported that the wind turbine was operating at optimal levels (The New Sentinel, 2011). The general maintenance of the turbine is conducted by a contractor outside the community. We recommend that North Saint Paul consider opportunities to leverage the local utility department to drive the expansion of clean energy initiatives, like the maintenance of the wind turbine. This move can directly generate more jobs for the community while bringing wind turbine expertise to North Saint Paul that could diversify the local economy.

Based on the reports of success from the wind turbine project,
North Saint Paul should consider expanding the project by installing additional turbines. It is suggest-

ed that smaller turbines can be installed on buildings in downtown areas (that meet the standard requirements for a wind mill). These additional mills could increase the local demand for installation and maintenance services which again supports the niche and the local economy.



North Saint Paul's wind turbine (http://b.vimeocdn.com/ts/160/768/160768918_640.jpg)

With additional investment in wind turbine technology, the Municipal Utility Company would be able to substitute wind energy for coal and energy from other non-renewable sources. As such, the costs from purchasing electricity from other sources would be reduced, leading to a reduction in the utility company's operation costs. It could then pass these savings on to residents and businesses. It is estimated that general energy costs account for roughly one-third of a business's operation costs (Energy Star,

2013). With such cost savings, businesses can either expand production or reduce the final prices of the products they sell.

Solar Energy

To further cement their position as a clean energy stalwart, the City of North Saint Paul can diversify its renewable energy initiatives further by investing in solar gardens. A solar garden is a community shared solar array that is connected to the larger power grid (solargardens.org). The Midwest Energy News reported that Minnesota Governor Mark Dayton signed a bill requiring the state's largest utility, Xcel Energy, to establish a community solar gardens program in 2014 (Haugen, 2013). In cooperation with the local utility company, North Saint Paul can utilize the roofs of buildings in the downtown area as possible locations for solar gardens. With federal funding such as federal tax credits, or net metering, North Saint Paul can provide incentives for companies to invest in constructing and maintaining solar gardens (dasolar.com, 2013). Once developed, the energy generated can be either be sold directly to the utility company or credited to the businesses in the downtown area as a way to reduce their carbon footprints while reducing their overhead costs. In cooperation with the local utility company, the North Saint Paul can utilize the roofs of buildings in the downtown area as possible locations for solar gardens.

Energy Retrofitting Fund Program

There are much simpler ways that businesses can also employ clean energy initiatives, such as energy retrofitting. Energy retrofitting is the process by which design and installation changes are made to a building and its technology to ensure more efficient use of energy. Such retrofitting procedures may not only reduce a company's carbon footprint, but also may improve its net operating income (NOI). According to Star Energy, a government backed program that helps to educate businesses on energy efficiency, a 10% reduction in energy usage may lead to a 1.5% increase in the company's NOI (dasolar.com, 2013).

Existing companies may require assistance in making the transition to more energy saving technologies. As such, it is recommended that a grant program be created for companies in the downtown area to retrofit their businesses to utilize more energy efficient technology. This grant should be complemented by clean energy education that provides business owners information on the benefits of the retrofitting processes. North Saint Paul has already developed such an education program; therefore its expansion into the downtown area becomes very plausible.

As was stated earlier, these clean energy initiatives are labor intensive and require highly skilled and highly trained labor. Some employment opportunities will require higher

levels of education and will pay premium wages, like those for engineers and scientists. However, these initiatives also utilize certain levels of non-degree labor that allows one to learn on the job, as is often the case for construction workers. Therefore, North Saint Paul would be able to attract a labor force with varying skills, thus improving the overall economic viability of downtown.

RENEWABLE ENERGY CASE STUDY: CLEAN ENERGY COLLEC-TIVE, COLORADO

The Clean Energy Collective (CEC) is a green energy company which provides individuals with the opportunity to purchase solar panels in community solar gardens (Clean Energy Collective, LLC, 2013a). The company was established in 2010 and is based in Carbondale, Colorado but has implemented solar garden projects across the United States. According to the CEC website, their mission is to "provide optimal clean energy solutions and supporting technology to serve our communities, businesses and utilities in creating a sensible and affordable clean energy nation" (Clean Energy Collective, LLC, 2013b).

The CEC utilizes a business model where it creates a spe-

cial-purpose entity (SPE) to manage each community-funded solar project. This SPE allows participants (who are utility customers) in the project to buy project shares in the form of panel ownership, as reported by Northwest Community Energy. The report goes on to state that the SPE then sells the energy the project to the

credits garnered by An example of a solar garden incorporated into a community garden in California (http://gigaom2.files.wordpress.com/2011/07/community-solar-garden-2.jpg?w=300&h=225)

utility company (Clean Energy Collective, LLC, 2013a).

The model is practical because the CEC partners with a major utility company in the community to sell generated electricity. As such, the system has a major buyer from its start. Furthermore, given that it is a shared system, investors are able to share the risks, like the costs of construction and maintenance, and the rewards, like additional income, of the system. Northwest Community Energy reported that minimum purchase of a CEC panel is roughly between \$500 and \$900 (Clean Energy Collective, LLC, 2013a).

The case highlighted that one of the first systems installed by CEC is estimated to generate income of around \$15,444 (\$198/kW) and has a payback period of 13 years. In addition, the panels have a life expectancy of 50 years. Since its inception, CEC has been able to install 13 systems totaling 5.3 megawatts (Clean Energy Collective, LLC, 2013a). CEC also utilizes the process of net metering. According to the National Renewable Energy Lab's A Guide to Community Shared Solar, net metering is the process used to account for the value of electricity generated in excess of electricity demanded. It goes on to state that net metering allows customers to sell this energy to the utility grid in the form of credits, allowing the customers meter to run backwards (Coughlin et al, 2012).

CEC is currently implementing a solar garden project in the city of Rockford, Minnesota, which is the first of its kind in the state (Baskt, 2013). The City of Rockford is located within Wright County and borders the edge of Hennepin County. It is also closely situated along Highway 55, just

thirty miles west of the metropolitan area. The garden was completed in July 2013 and each panel was sold for \$869.17. The success of this garden has prompted the city to look into expanding the program into multi-

ple gardens (Dayton, 2013).

GREEN TRANSPORTATION: LEVERAGING THE GATEWAY TRAIL

Another way to promote green initiatives in the city of North Saint Paul is to encourage non-motorized transportation options. Utilizing the existing Gateway State Trail and constructing additional bicycle facilities, the city of North Saint Paul can help to improve the quality of life and to invigorate the local economy. Improvements to the bicycle infrastructure should focus on both comfort and safety. Installation of way-finding mechanisms that lead bicyclists to enter downtown and implementation of complete street strategies can help promote bicycle use and the growth of cycling related businesses.

Gateway State Trail

Utilizing the adjacent Gateway State Trail to promote bicycle traffic can positively impact the environment and economic development in North Saint Paul. Bicyclists do not contribute to energy consumption, nor do they produce greenhouse gas emissions. The use of bicycles not only serves as a symbol for the clean energy initiatives in the city's master plan, it also increases the economic viability of the downtown retail zone.

Even though the trail runs adjacent to downtown North

Saint Paul, many cyclists pass without even noticing the downtown retail district nearby. Improving the connection between downtown and the trail can attract bicyclists from other communities in the metro area to visit downtown.

Partially due to the Gateway State Trail, North Saint Paul has very high bicycle accessibility. Parts of Saint Paul, Maplewood, Oakdale, and White Bear Lake are within a 30 minute bicycle trip (see Figure 8). North Saint Paul can potentially be a weekend destination for bicyclists throughout the eastern metropolitan area. Serving as a stopping point along the trail can also boost the demand for businesses in the downtown retail district.

Bicycle Tourism

Capitalizing on the existing bicycle infrastructure provides great economic opportunities for downtown businesses. While a majority of visitors drive to downtown North Saint Paul, the potential of the 7th Avenue East corridor as a destination for bicyclists is largely untapped. As part of the 1,500-mile paved bicycle trail in Minnesota, the Gateway State Trail connects North Saint Paul with both urban bike lanes in the Twin Cities and trails in the wilderness of Northern Minnesota. Minnesota has devoted efforts to promote bicycle tourism in both urban and rural parts of the state (Explore Minnesota Tourism, 2012). North Saint Paul should utilize both its key location and the state's resources to promote bicycle trips. The increase in activity associated with bicycle traffic can enhance the atmosphere of the public realm in downtown. Furthermore, higher bicycle mode share reduces air pollution and increases expenditures in downtown businesses.

Bicycle Traffic Boosts Retail Spending

Research shows bicyclists spend more money per capita than drivers in North American cities. Along the streets in East Village, New York, which are equipped with bike lanes, bicyclists top all other travel modes in monthly per capita spending. Similar patterns are found in bicycle-friendly parts of Toronto and Portland (Transportation Alterna-

tives, 2012). Although North Saint Paul is not a high density urban center, research findings on the economic impact of bicycles provide valuable insights for North Saint Paul to consider incorporation of alternative modes of transportation in its downtown. Unlike most suburbs in the Minneapolis-Saint Paul metropolitan area, the higher density downtown core along North Saint Paul's main street (7th Avenue) has high

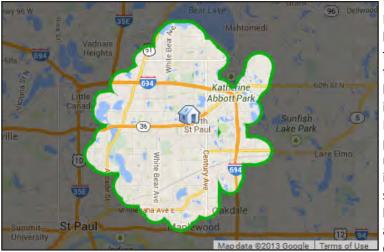


Figure 8 - Areas within 30 minutes bicycle trip from downtown North Saint Paul (walkscore.com, 2013)

potential for additional bicycle infrastructure.

The Gateway State Trail is also connected with other regional trails, such as the Bruce Vento Trail. The junction of the Gateway and the Bruce Vento trails in Maplewood provides quick bicycle access to North Saint Paul. Bicyclists can reach downtown North Saint Paul from Union Depot in Saint Paul in approximately forty-five minutes. Downtown

Bicycle traffic not only boosts sales for other retail businesses. In 2012, bicyclists spent \$10 billion on gear, accessories, and vehicles and \$81 billion on bicycle trip-related expenses (Outdoor Industry Association, 2012). Bicycle-related expenditures generate more than \$1 billion in Minnesota each year, which is equivalent to the combined

revenue from hunting and fishing (Explore Minnesota Tourism, 2012).

Suburban communities across the country have promoted bicycle use by adopting complete street strategies and adding bicycle trails (Liz, 2013). The proximity to the Gateway State Trail and the downtown streetscapes make North Saint Paul an accessible and desirable community for bicyclists. The development of a "bicycle niche" will bring new visitors to North Saint Paul's downtown and potentially increase the amount of money spent by those visitors in downtown establishments. In higher density urban areas, bikers tend to spend more than drivers because they can easily make multiple stops. Downtown North Saint Paul has a cluster of retail businesses within close proximity, which similarly allows the city to reap the economic benefits of bicycling.

"Biking to Downtown"

Promoting bicycle use in downtown not only attracts Gateway State Trail users to visit North Saint Paul, it also increases mobility and mode choices for local residents. The entire city of North Saint Paul is within a ten-minute bike ride from downtown (Margaret Street and 7th Avenue). Enhancing the connectivity between residential areas and the downtown will increase access to goods and services within the retail district. The city should incorporate a "complete streets" strategy to promote the bicycle and pedestrian environment along the 7th Avenue Corridor. The improvements in bicycle infrastructure can attract North Saint Paul residents to make short bicycle trips to downtown for essentials goods and services – an alternative to driving to shopping malls located outside of the city. A reemphasis on downtown public space (parks and sidewalks) and biking to downtown offers a unique experience for residents in North Saint Paul and neighboring suburbs.

Besides the urban design solutions, downtown businesses can also adopt strategies to attract bicycle tourists. Bicycle-friendly businesses should conspicuously display maps of the downtown area and the broader region. North Saint Paul downtown businesses should also provide essential biking equipment and tools to lend to cyclists. Furthermore, businesses can collaborate on shared facilities such as bike racks, lockers, or restrooms. Restaurants can market the "bicyclist breakfast" menu for travelers who engage in intense physical activities. Retailers can also offer shipping services for their products as bicyclists are often unable to carry their purchases (Parks & Trails New York et al., 2013). The joint effort between the city and downtown businesses can transform downtown North Saint Paul into a bicycle friendly destination.

BICYCLE INFRASTRUCTURE CASE STUDY: COUNTRYSIDE, ILLINOIS, "A BICYCLE FRIENDLY SUBURB"

The trend of creating a more bicycle-friendly environment is expanding from urban centers to suburbs. Countryside, Illinois is a suburban community fifteen miles west of the Chicago Loop. The city of Countryside is near the Interstate 55 and Interstate 294 junction and is served by Metra commuter rail and a BNSF freight railway. Improvements in bicycle infrastructure in Countryside is part of the Active Transportation Network plan designed to make biking and walking trips from residents' homes to neighborhoods, parks, trails, businesses, and transit stops safe, convenient, and enjoyable (Active Transportation Alliance, 2012).

Surrounded by other larger communities, Countryside is a relatively small inner-ring suburb of Chicago with a population of 5,895 in 2010. The vision of the Active Transportation Network plan is to transform the city of Countryside into a vibrant and healthy community with a safe, well-lit and complete bicycle and pedestrian network. With the completion of the project, walking and biking will be viable means of transportation for different kinds of trips. The new bicycle and pedestrian network will connect residents with major business corridors,

Hinsdale Western Springs

Indian Head Park

Burr Ridge

Burr Ridge

Willow Springs

Justi

Figure 9- Map showing the locations of hubs and gateways in Countryside, IL (Active Transportation Network)

parks, schools, and Metra stations. The implementation of the Active Transportation Network plan involves infrastructure improvement recommendations, as well as programming for education, encouragement, and enforcement. The ultimate goal of the plan is to improve the safety of pedestrians and bicyclists and increase their convenience for getting around town.

Bicycle improvements, along with pedestrian and transit improvements, are a part of the overall Active Transportation Network plan. The network plan first identifies the routes of pedestrian paths, bicycle trails, and multi-use trails. The objective of the network is to reach parks, restaurants, businesses, neighborhoods, schools and jobs. After identifying the key intersections within the network,

the plan recommends the development of gateway and hub intersections as key network connection points. Gateways are key entrances to the districts prioritized for placement of network way-finding signs and identity features, like public art installations and banners. Hubs are central intersections prioritized for the placement of network amenities, such as transit shelters, bike parking, benches, and human-scale lighting. Figure 9 shows the locations of hubs and gateways in Countryside.

Bicyclists enter the city of Countryside through gateways. Intersections planned as gateways are equipped with signage enhanced with landscaping. Mass landscaping arrangements also attract attention to the gateway. Hubs are intersections in central locations along bicycle-friendly routes in the community. These intersections will serve as transit connection points. The conveniently located hubs also provide easy access to nearby businesses, schools, and other amenities. Additional facilities, such as signage, special pavement, bicycle parking, and benches are used

to contribute to the character of a hub.

To improve accessibility and safety for cyclists, Countryside will construct bike routes, trails, bicycle parking, traffic signal detectors, and bicycle network signs. Low-traffic residential streets with wide outside lanes and paved shoulders are suitable for bike routes. Shared lane markings will also be installed along bike routes. Trails are also planned in the city of Countryside to provide connections to regional trails and parks. Other bicycle amenities, such as signs, parking and traffic signal detec-

tors, are also included in the bicycle improvement plan. Bike parking will be installed at the hubs identified in the Active Transportation Network plan. Pavement markings at signalized intersections show cyclists where to place their bike for detection by demand-actuated signals.

The locale of Countryside, Illinois is similar to that of North Saint Paul, Minnesota. With access to major highways and trails, both cities are situated outside of principle cities (Chicago and Saint Paul) and are surrounded by more populated suburbs. The plans of infrastructural improvement to incorporate bicycle use in Countryside can also be adapted by North Saint Paul.

CONCLUSION

asked with developing a niche market strategy, our project team presented findings that explore ways that the City of North Saint Paul can nurture and expand current economic strengths, build on the rich history of the city, and explore new possibilities to create a vibrant, unique and thriving downtown.

Our project team used a variety of techniques to perform market analysis and identify potential market niches for downtown North Saint Paul, including: conducting a business and vacant land inventory in the downtown area, visiting several community events and speaking with local residents, and completing a market analysis through ESRI Business Analyst. These tools were then combined with a review of relevant literature and case studies in order to provide the city of North Saint Paul with ideas for market niches and directives toward their implementation.

We developed three different niches for the downtown: one that incorporates the past, one that addresses the present, and one that considers the future.

By pursuing a variety of niche strategies focusing on moving North Saint Paul toward a progressive future, while capitalizing on its assets, the community can make downtown North Saint Paul a truly unique destination capable of competing with regional retail centers such as Maplewood Mall.

Short and medium-term strategies include strengthening the value of existing cultural resources and an existing antiques niche, while pursuing new industries that take advantage of industrial and warehouse space, create high paying jobs, and complement downtown retail activity. In the long-run, the city can encourage greater patronage of downtown businesses by fostering an image and culture based on sustainability and clean energy. Taken together, these strategies will create a unique downtown experience—one that is rooted in North Saint Paul's heritage, makes the most of a unique and valuable mix of land uses, and pushes the city toward a progressive, sustainable future.

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APPFNDIX

BUSINESS INVENTORY MAPPING APPLICATION

Our team has created an online, interactive mapping application to allow the North Saint Paul community to access our business inventory data, along with parcel data within the downtown area. The business inventory was conducted on Friday, September 20, 2013 between 8:200 AM and 2:00 PM. This appendix provides basic instructions on how to use some of the application's features.

The map can be accessed via: http://bit.ly/1bpUqsD

Navigation

Map layers can be found by clicking on the "Content" or "Legend" tabs.

Content Tab can be used to complete the following tasks:

- Turn layers off and on by clicking in the checkbox next to the layer name
- Access a menu for each layer in order to manipulate the data by clicking on the drop-down arrow to the right of the layer name

Legend Tab will show the key for interpretation of the map as currently displayed. It will reflect any changes made in the content tab, including turning layers off and on or changing the layer symbols (not recommended).

Base Maps



You can turn different base maps on by clicking on the "Basemap" button and choosing one of the options. This will allow you to view street names, labels for important locations, or satellite imagery.

Data Layers

Closed Businesses shows the location of any businesses that appeared to be permanently closed at the time of the business inventory.

Businesses shows the location and NAICS 2 digit category of businesses observed at the time of the business inventory within the downtown area.

Vacant Space shows the location of any buildings that appeared to be partially or fully vacant at the time of the business inventory.

Vacant Land shows the location of parcels

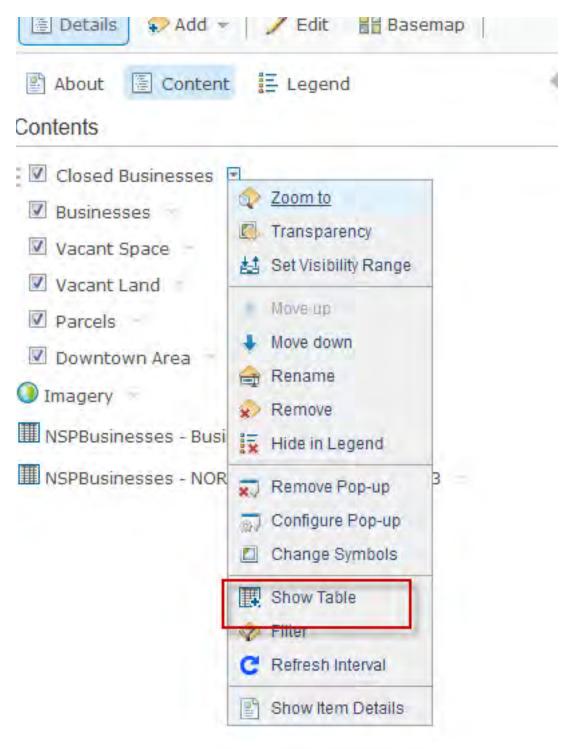
that indicated some degree of vacancy or underutilization according to records obtained from Ramsey County.

Parcels shows all Ramsey County parcels within the downtown area

Downtown Area represents the Downtown Diversified zone, and corresponds to the location of the study area.

Viewing Data Attributes

Individual attributes of each of the points, parcels, and other features on the map may be viewed by left clicking on them. In addition, a table of all attributes for features corresponding to a data layer can be viewed by left clicking on the dropdown arrow to the right of any layer in the Content tab of the Details pane, and choosing "Show Table."

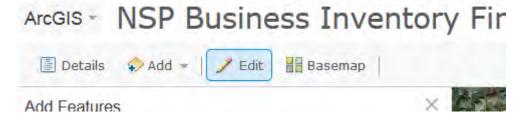


You can show the location of an individual entry in the table by clicking anywhere on that entry. The feature corresponding to the entry will show up within blue crosshairs on the map itself.



Editing Data

Data may be edited by clicking on the "Edit" pane along the toolbar. Because this data is editable, it is extremely important that the link to the map is only shared with trusted individuals or organizations.



Adding New Features

It is possible to add a new feature by clicking on the legend entry corresponding to the feature category you wish to add. If you want to add a new business in the Health Care and Social Assistance category, click on Health Care and Social Assistance, and then click the location of the business to add it to the map. Enter any relevant information in the pop-up box containing the newly created feature's attributes.

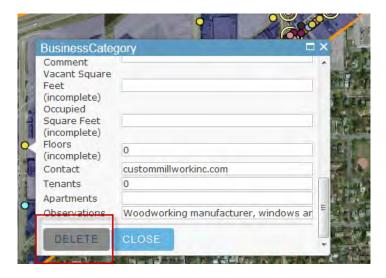
Editing Existing Features

To edit the attributes of an existing feature, simply click on that feature on the map. If an editing session is already open (by clicking the "Edit" button before clicking on the feature), you will immediately be presented with a pop-up box allowing you to edit the selected feature. Otherwise, you can click on "Edit" at the bottom of the pop-up display box.

Business Name: Custom Millwork
Business Custom Millwork
Business Custom Millwork
Name
Business Window and Door manufacturer
NAICS_code 337,212.00
NAICS 4 digit 3372
code
NAICS 4 digit Office Furniture
desc (including Fixtures)
Manufacturing
NAICS 2 digit 33
code
NAICS 2 digit Manufacturing
desc
Zoom to Edit

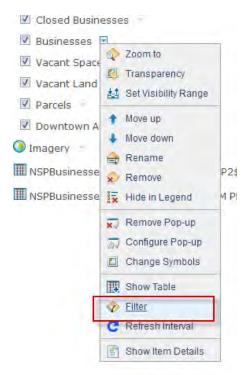
Deleting an Existing Entry

It is possible to delete an existing feature by choosing to edit it, scrolling to the very bottom of the editing window that appears, and clicking on "Delete."



Data Manipulation and Filtering

One of the most useful ways that data can be manipulated is by filtering it. To filter, click on the Content tab of the Details pane, left click on the dropdown arrow to the right of the layer you would like to filter, and choose "Filter."

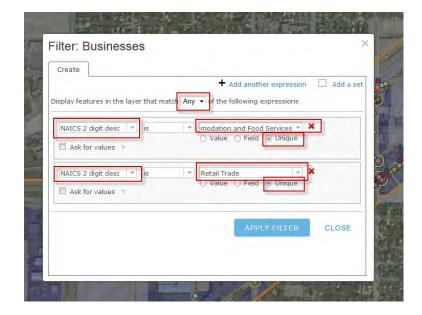


An example is provided below to show how filtering works.

Filtering Example: Filter on businesses that are either "retail" or "accommodation and food services"

Step 1: Left click on the dropdown arrow to the right of the "Businesses" layer and choose "Filter."

Step 2: In the left hand box, choose "NAICS 2 digit desc." Leave the logical operator as "is."



- Step 3: In the right hand box, choose the "Unique" radio button and select "Accommodation and Food Services" from the drop-down menu.
- Step 4: Click "Add another expression."
- Step 5: Repeat steps 2 and 3, but this time choose "Retail Trade."
- Step 6: Finally, click on the dropdown box at the top of the window and choose "Any" so that the instructions for the search reads "Display features in the layer that match Any of the following expressions."

Step 7: Click Apply Filter

Resulting Map:



BUSINESS INVENTORY RESULTS SUMMARY

NAICS 2 Digit Category	NAICS 4 Digit Category	Count	% of Total
Other Services (Except Public Admi			
tion)		21	18%
	Personal Care Services	10	8%
	Automotive Repair and Maintenance	6	5%
	Civic and Social Organizations	2	2%
	Business, Professional, Labor, Political, and Similar Organizations	1	1%
	Death Care Services	1	1%
	Religious Organizations	1	1%
Retail Trade	5	18	15%
	Other Miscellaneous Store Retailers	3	3%
	Used Merchandise Stores	3	3%
	Book, Periodical, and Music Stores	2	2%
	Electronics and Appliance Stores	2	2%
	Florists	2	2%
	Gasoline Stations	2	2%
	Clothing Stores	1	1%
	Electronic Shopping and Mail-Order Hous-		
	es	1	1%
	Furniture Stores	1	1%
	Health and Personal Care Stores	1	1%
Health Care and Social Assistance		17	14%
	Offices of Other Health Practitioners	6	5%
	Home Health Care Services	3	3%
	Offices of Dentists	3	3%
	Offices of Physicians	2	2%
	Child Day Care Services	1	1%
	Community Food and Housing, and Emergency and Other Relief Services	1	1%
	Medical Equipment and Supplies Manufac-		
	turing	1	1%
Accommodation and Food Services		15	13%
	Limited-Service Eating Places	7	6%
	Drinking Places (Alcoholic Beverages)	4	3%
	Full-Service Restaurants	3	3%
	Special Food Services	1	1%
Manufacturing	Analytic at unal and Church and Martin Martin	15	13%
	Architectural and Structural Metals Manu- facturing	3	3%
	Other Miscellaneous Manufacturing	3	3%
	Medical Equipment and Supplies Manufac-	J	270
	turing	1	1%
	Metalworking Machinery Manufacturing	1	1%

	Motor Vehicle Body and Trailer Manufac-		
	turing	1	1%
	Office Furniture (including Fixtures) Manufacturing	1	1%
	Other Wood Product Manufacturing	1	1%
	Paint, Coating, and Adhesive Manufactur-		
	ing	1	1%
	Petroleum and Coal Products Manufactur- ing	1	1%
	Plastics Product Manufacturing	1	1%
	Semiconductor and Other Electronic Com-	'	1 70
	ponent Manufacturing	1	1%
Professional, Scientific, and Technical			
Services		9	8%
	Legal Services	3	3%
	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	2	2%
	Architectural, Engineering, and Related		
	Services	1	1%
	Management, Scientific, and Technical Consulting Services	1	1%
	Other Professional, Scientific, and Technical Services	1	1%
		_	1%
Construction	Specialized Design Services	1 6	5%
Construction	Posidential Building Construction	2	2%
	Residential Building Construction	1	2% 1%
	Building Equipment Contractors		
	Building Finishing Contractors	1	1%
	Nonresidential Building Construction	1	1%
Finance and Income	Other Specialty Trade Contractors	1	1%
Finance and Insurance	la como a considera	5	4%
	Insurance Carriers	3	3%
	Depository Credit Intermediation	1	1%
	Other Financial Investment Activities	1	1%
Arts, Entertainment, and Recreation	Museuma Historical Sites and Similar	4	3%
	Museums, Historical Sites, and Similar Institutions	2	2%
	Other Amusement and Recreation Industries	2	2%
Wholesale Trade	uies	4	3%
Timologuio Traud	Beer, Wine, and Distilled Alcoholic Bever-	-	070
	age Merchant Wholesalers	1	1%
	Electrical and Electronic Goods Merchant Wholesalers	1	1%
	Lumber and Other Construction Materials		
	Merchant Wholesalers	1	1%
	Professional and Commercial Equipment and Supplies Merchant Wholesalers	1	1%

Management of Companies and Enterpris-		_	
es		2	2%
	Management of Companies and Enterpris-		
	es	2	2%
Real Estate and Rental and Leasing		1	1%
	Offices of Real Estate Agents and Brokers	1	1%
Administrative and Support and Waste			
Management and Remediation Services		1	1%
	Services to Buildings and Dwellings	1	1%
Educational Services		1	1%
	Elementary and Secondary Schools	1	1%
Information		1	1%
	Newspaper, Periodical, Book, and Directo-		
	ry Publishers	1	1%
Total		120	100%