



School of
**Urban &
Regional
Planning**



Reimagining the South Port of Dubuque



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Executive Summary

The City of Dubuque, Iowa continues to take proactive steps to promote sustainability, planning, and community engagement. In August of 2012 the City reinforced its vision and mission for the future. The Dubuque vision for 2027 states "...the Dubuque community is an inclusive community celebrating culture and heritage and has actively preserved our Masterpiece on the Mississippi; Dubuque citizens experience healthy living and active retirements through quality, livable neighborhoods and an abundance of fun things to do and they are engaged in the community, achieving goals through partnerships...". Five-year city goals include planned and managed growth, partnerships for a better Dubuque, and improved connectivity. Five-year community goals include the three pillars of sustainability identified by the City: economic prosperity, social/cultural vibrancy, and environmental integrity (Sustainable Dubuque: Dubuque's Approach, 2012).

The Port of Dubuque continues to change to encompass Dubuque visions and values. In 2013, the Port of Dubuque consists of two contrasting areas, the North Port and the South Port, both adjacent to the historic Ice Harbor. All who enter Dubuque along the Mississippi River see the Port of Dubuque. The Port of Dubuque Master Plan was adopted in 2002 to make the Port an appealing gateway to Dubuque. As a result of the Master Plan, the North Port now represents a lively and attractive destination spot in Dubuque. While the North Port sets a prime example of successful redevelopment in a once struggling area, the South Port lags. It is now time to review the 2002 Port of Dubuque Master Plan vision for the South Port.

In continuation of a partnership through the Iowa Initiative for Sustainable Communities graduate students from The University of Iowa School of Urban and Regional Planning, along with the City of Dubuque, reexamined the vision for the South Port. A project spanning from August 2012 until May 2013 reviewed the state of the South Port in relation to the 2002 Master Plan, examined best redevelopment practices elsewhere, engaged community members, and evaluated land use alternatives based on market potential, physical suitability, and Dubuque's goals for the future. After completing the planning process, the recommended use for the South Port comprises of lower density mixed-uses including extensive open space and recreational opportunities with some commercial development. Walkability and connectivity to downtown Dubuque and the North Port area are key elements of design. The future South Port is best suited as a green gateway to Dubuque that showcases the City's sustainability goals. The final recommendation reflects community preferences along with an evaluation of the most feasible redevelopment alternatives for the South Port of Dubuque.

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Introduction and Acknowledgements

Starting in the 2011-2012 school year, The University of Iowa School of Urban and Regional Planning partnered with the City of Dubuque through the Iowa Initiative for Sustainable Communities (IISC). IISC works to enhance sustainability in towns, cities, and counties in Iowa faced with difficult future challenges (Iowa Initiative for Sustainable Communities, 2012). The Dubuque partnership, known as the Sustainable Dubuque Project, continued for the 2012-2013 school year. New projects determined by Dubuque City leaders focused on several challenges confronting Dubuque and Dubuque County. Based on initial meetings with key Dubuque stakeholders, five Sustainable Dubuque Projects were identified for the 2012-2013 school year. For a listing of all the projects refer to Appendix G. The following report focuses on one of the identified projects concerning an area south of Ice Harbor in the Port of Dubuque, referred to in the report as “South Port”.



Seven graduate students were selected to work on the project, known as the South Port Group, with the assistance of project partners from Dubuque and faculty members from The University of Iowa, School of Urban and Regional Planning. The project partners played a crucial role in providing information and guidance throughout the project. Continual communication with city partners ensured outcomes aligned with planning efforts already happening in Dubuque. Project

partners with the City of Dubuque Planning and Zoning and Economic Development Departments helping to make the planning process possible include:

- Laura Carstens, Planning Services Manager, Dubuque Planning Services Department
- Guy Hemenway, Assistant Planner, Dubuque Planning Services Department
- Phil Wagner, Assistant Director of Economic Development, Dubuque Economic Development Department



The South Port Group also received valuable guidance from faculty advisors. The Group met weekly with advisors to give updates and receive feedback on the progress of the project. The main faculty advisor with The University of Iowa, School of Urban and Regional Planning was Dr. Charles Connerly, Professor and Director, Ph.D. Urban and Regional Planning.



Project Statement

How should the South Port be redeveloped to match today's vision of Dubuque?

The South Port of Dubuque comprises of 33 acres of semi-industrial land. A Master Plan for the Port was adopted in 2002. Dubuque leaders identified the South Port as an area of concern in 2012 (Goals and Priorities, 2012). The South Port currently lacks visible improvements, while just across Ice Harbor the North Port shows extensive redevelopment. Several issues arise in planning a successful vision for the South Port. Identifying what challenges face the South Port, who will determine the best use of the South Port, and what type of development is feasible all build the base of the project.

2002 Port of Dubuque Plan



Source: Port of Dubuque Master Plan, 2002

Dubuque is a proactive community and national leader in prioritizing sustainability. Future uses in the South Port should reflect this, as shown in the project statement. The project statement culminates with a recommendation for the highest and best use redevelopment alternatives. With community input providing the best use and evaluation criteria providing the highest, most feasible use, the recommendations serve as another step toward a more sustainable and vibrant Dubuque.

The Port of Dubuque is rich in history and an iconic destination on the Mississippi River. The following report provides a brief history of the Port, along with previous city planning activities. A review and evaluation of the 2002 Port Master Plan details the implementation of development until 2012. The South Port faces many challenges for development. An examination of other port and railroad plans demonstrates possibilities for Dubuque. The remainder of the report details the actions taken to determine the highest and best use of the South Port including various forms of public input, a land use analysis for the site, and alternative design plans. The report concludes with the final recommendation for future development in the South Port.

Project Goals

The underlying goal aims to recommend alternatives for the South Port of Dubuque in line with the stated future vision for Dubuque. History shows the importance of community involvement in shaping the current state of Dubuque. City leaders engage citizens from the start, whether through the creation of new task forces or the development and implementation of city planning documents (Goals and Priorities, 2012). Recognizing the value Dubuque places on its citizens, the **first** goal aimed to gather significant community

input. Understanding community preferences is essential for creating viable recommendations. The **second** goal aimed to align recommendations with the vision of Dubuque. A recommendation consistent with city visions ensures synergy of the South Port with the North Port, downtown, and Dubuque as a whole.

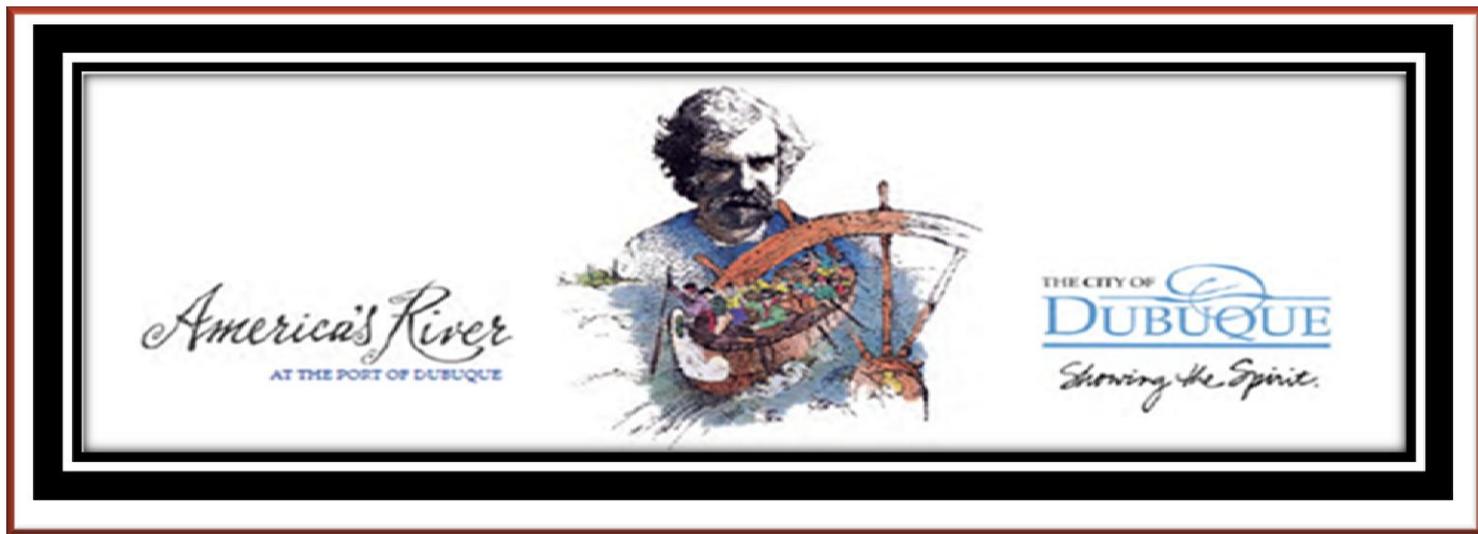
Methodology

Several tasks led to the final recommendation. The South Port is part of a larger network. The area comprises only one piece of the “puzzle” that makes up Dubuque. Therefore, any redevelopment alternatives for the South Port should fit with the overall visions of Dubuque. To become familiar with the site, several Group members reviewed the Port of Dubuque history, the current conditions facing the South Port, and the current plans and visions in Dubuque. All Group members then worked to discover the public preference for redevelopment. Community input allows for the creation of the best use alternatives. Citizens have the long-term stakes in the Port and will see the recommendations get implemented. Public input included a public brainstorming session held on October 25, 2012 and a community survey in January 2013 to discover land use preferences for the 33 acres. The public input data were compiled and organized to allow for easy analysis of the most preferred alternatives.

In addition to public input, the South Port Group evaluated land uses for feasibility in the South Port. Criteria were used to evaluate five land use types for their fit in the South Port related to Dubuque’s three sustainability pillars, market potential, and physical suitability. Based on the public input

and criteria evaluation, four design alternatives were created and presented to the public in a final feedback session on April 11, 2013. The session served as the final step before arriving at the best combination of feasible design features for the South Port.

PORT OF DUBUQUE HISTORY AND PAST PLANS



Port of Dubuque History until 2002

The City of Dubuque was founded in 1788 by Julien Dubuque and was the first permanent European settlement in Iowa. Julien Dubuque founded the city after moving to the area and befriending the “Mesquaki Indians who occupied the region and worked with them to mine the plentiful lead mines, which he later named the Mines of Spain” (America’s River, 2012). Lead mining attracted settlers to the area and its location along the Mississippi made shipping lead ore to St. Louis easier (East Dubuque School District, 2000).

According to the City of Dubuque (2012) Julien mined lead ore until his death in 1810. In 1833 the United States Government opened Dubuque for settlement after the Black Hawk Purchase Treaty was signed. The purchase allowed the City of Dubuque to be chartered in 1837 and soon various industries began to flourish due to its location along the Mississippi River. After the Civil War, major industries opened including “button making, boat building, logging, mill working, meat packing, and other heavy industries.” The Port of Dubuque was integral to its early success especially after the first Dubuque Railroad bridge was built in 1868 connecting Illinois to Iowa. By 1889, as shown in Figure 4 below, the Port had expanded and became a major center of industry.

The Port became a transportation hub for the many steamboats that traveled up and down the Mississippi River, explaining why boat building was among its earlier industries. For example, the JS Delux was built in 1896 for the Diamond Jo Line of the St. Louis St. Paul Trading Company and the Admiral was built in 1906 as a railroad transfer boat.

Mines of Spain



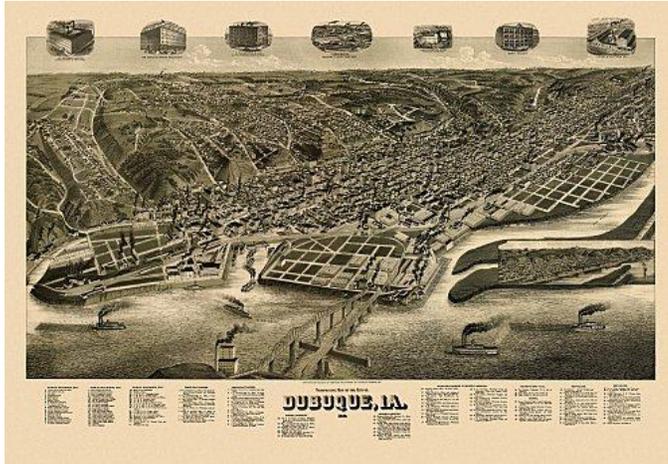
Source: Mapquest 2012

JS Delux (1896) and Admiral (1906)



Source: Online Musuem

1: Historical Port of Dubuque



Source: Iowa Pathways Map of Dubuque 1889

Besides ship building, the Port was also heavily used by the railroad after the Dubuque Railroad Bridge was built. The Bridge allowed Chicago's Central & Pacific railroad and Iowa's Chicago & Eastern railroads to access the Port area (Encyclopedia Dubuque, 2012). The Port of Dubuque was also used for recreation as shown to the right of Dubuque citizens using the Port for ice skating in 1907. However, due to the railroad and Mississippi River access along the Port, the primary uses revolved around industry rather than recreation use.

The Port was further transformed in 1943 when the Julien Dubuque Bridge was built just south of the Ice Harbor, cutting the South Port in half (Encyclopedia Dubuque, 2012). Flooding occurred in the lower portions of the Port but did not gain the attention it deserved until 1965 when the Port experienced a record-breaking flood (Shaffer & Tigges, 2000). To help protect the Port and the City of Dubuque, a flood wall was

constructed along the Mississippi River in 1973. Once the floodwall was constructed most industry occurring in the Port came to a halt until the 1990s when riverboat gambling was legalized in Iowa.

Port Ice Skating, 1907



Source: Encyclopedia Dubuque (2012) Image 1907

Julien Dubuque Bridge, 2012



Source: Wikipedia, Julien Dubuque Bridge (2012)

Historical Flooding in Dubuque



Source: Ebay 1965 Dubuque Press Photo (2012)

The first casino in the Port was called the Casino Belle. Within five years it was replaced by the Diamond Jo Casino. With the popularity the Port was gaining, the City of Dubuque embarked on a new venture of redeveloping the Port, thus creating the 2002 Port of Dubuque Master Plan for redevelopment.

2002 Port Master Plan

In June 2001 the City Council embarked on a quest to reclaim the underutilized and brownfield property located within the Port of Dubuque. Between June 2001 and March 2002 the City of Dubuque developed goals and design standards that matched the vision laid out in the City comprehensive plan. In the 2000-2002 comprehensive plan update, as well as the 2006-2007 update, public input was sought by way of “public comment

sessions, focus group meetings, open houses, displays, and public hearings” (Dubuque Comprehensive Plan, 2008, p. 2). During the public engagement time period Dubuque citizens were asked to offer their ideas on how to revitalize the 120 acre riverfront of the Port (Port of Dubuque Master Plan Summary, 2012, p. 1). The process became known as the America’s River Project.

The 2002 Port of Dubuque Master Plan was created in a three part process. The first few months were spent conducting a physical and market analysis. The second actions focused mainly on conceptual design. The third actions, within the last months, focused on the final design. All together the Plan includes seven planning elements revolving around land use regulation, the thoroughfare, pedestrian circulation, the built form, an illustrative plan, a phasing plan, and six major objectives for redeveloping the Port which are listed below (p. 5).

- Capitalize on investment
- Consist of mixed-use development
- Build on existing and/or previously planned uses
- Make the Port both pedestrian and transit oriented
- Model the block and street pattern after the downtown
- Develop the Port as an extension of the downtown
- Balance both market demand and a creative vision

Regulating Plan

The North Port consists of 88 acres and the South Port consists of 33 acres. Because the Plan promotes mixed-use development in both the North and South Port, the regulating plan points out the types of mixed land uses allowed in each

area as shown in the table to the right and in the map on the next page.

- **Mixed Use - 1 (dark orange)** area allows only business and employment oriented uses and are located along the highway and railway.
- **Mixed Use - 2 (light orange)** area offers the widest range of development to include everything that is allowed in the Mixed Use -1 area but also a wider range of office uses, entertainment, and even multi-family residential.
- **Mixed Use - 3 (pink)** area is a bit different in that its “intended to promote a more commercial, main street environment [with] a minimum of 60% of the ground floor area of buildings facing 5th and Bell Streets and be dedicated to business service, retail and restaurant/lounge or café uses” (p. 5). This area also only allow residential to be built in the upper floors of buildings.

2002 Port Proposed Land Uses

Proposed Land Use Type for North Port (88 Acres) and South Port (33 Acres)						
		North	South		North	South
	Mixed Use - 1	13.3 Ac.	8.8 Ac.		Mixed Use - 3	14.8 Ac. 0.0 Ac.
	• Office				• Office	
	• Medical Office				• Medical Office	
	• Office Showroom				• Institutional	
	• Institutional				• Commercial/Retail	
	• Commercial/Retail				• Entertainment	
	• Entertainment				• Hospitality	
	• Public				• Restaurant/Café	
	Mixed Use - 2	9.6 Ac.	14.3 Ac.		• Residential –	
	• Office				(Upper Floors Only)	
	• Medical Office					
	• Institutional					
	• Commercial/Retail					
	• Entertainment					
	• Hospitality				Open Space	6.0 Ac. 3.1 Ac.
	• Restaurant/Café				R.O.W.	10.6 Ac. 5.1 Ac.
	• Residential –				Existing and Preplanned	33.7 Ac. 0.7 Ac.
	• Attached Multi-Family				New Marina Area	0.0 Ac. 1.0 Ac.

Source: 2002 Port of Dubuque Master Plan Land Uses

Proposed Land Use in the North and South Port



Source: 2002 Port of Dubuque Master Plan

Thoroughfare Plan

The proposed thoroughfare plan identifies three street types. They include “73 foot right-of-ways and parallel parking, 60 foot right-of-ways and parallel parking, and 50 foot right-of-ways without parking” (p. 5).

Pedestrian Circulation Plan

Not only does the Port of Dubuque Master Plan propose two types of circulation, semi-public and public sidewalks, but includes a plan to connect the North to the South Port and the downtown area as shown to the right. Semi-public sidewalks are shown in orange and public sidewalks & trails are shown in green.

Proposed Pedestrian Circulation Plan



Source: 2002 Port of Dubuque Master Plan (Thoroughfare Plan)

Built Form Plan

The proposed built form plan shows where buildings should locate to be near or up to both sidewalks and the waterfront. It is also stated that underground parking is impractical due to “current land values and a high water table;” (p. 5) therefore, proposed parking is set to be located in the rear, center, and inner sides of the port.

Illustrative Plan

The illustrative plan simply brings all the plans together to show how the North and South Port are envisioned to be developed.

Phasing Plan

Altogether the Port of Dubuque Master Plan proposes six phases of redevelopment, shown on the next page. The North Port was stated to take up to ten years to redevelop followed by another 8 to 10 years to redevelop the South Port. Currently, the City is in the final two phases involving redevelopment in the South Port. Does the 2002 Port of Dubuque Master Plan still match the vision of Dubuque citizens today? That is a question the City asks and which the South Port Group aims to answer.

Proposed Built Form Plan



Source: 2002 Port of Dubuque Master Plan (Built Form Plan)

Proposed Illustrative Plan



Source: 2002 Port of Dubuque Master Plan (Illustrative Plan)

Port of Dubuque Phasing Plan



North Port Development

As seen in the images to the right, the North Port has experienced a major transformation between 2002 and 2010. According to the South Port Summary Report (2012) approximately \$400 million dollars (public and private) has gone into the revitalization efforts for redeveloping the North Port over the last 10 years. The redevelopment transformed the North Port from a run down, brownfield area, to a destination that “captures the historical, environmental, educational and recreational majesty of the Mississippi River and the historic Ice Harbor” (p.1).

The Grand Harbor Resort & Waterpark was built during the first phase of redevelopment in the North Port and opened in December 2002. The hotel/waterpark offers 193 rooms and a 25,000 square foot indoor waterpark. Within six months the National Mississippi River Museum & Aquarium was built and opened in the summer 2003. During the same time, the River Walk, River’s Edge Plaza, and the Alliant Energy Amphitheater were added.

In 2007 the Stone Cliff Winery renovated the building that once housed the Dubuque Star Brewery. McGraw Hill also made the North Port home with their newly constructed 4-story office building. In December 2008 both a new public parking facility was built offering 1,150 parking spaces, as well as the Diamond Jo Casino which boasts a 30 lane bowling alley and dining entertainment. The Mystique Casino is another casino in the North Port offering gambling and greyhound racing as of 2009. Lastly, the Durrant Group Corporate headquarters renovated an 18,000 square foot building. The most updated image of the North Port is shown below.

North Port 2002



Source: Iowa Geographic Map Server, 2012

North Port 2010



Source: Iowa Geographic Map Server, 2012

Redeveloped North Port



Source: America's River Project Overview 2012

Planned Phases V & VI for the South Port

Currently, phases V & VI for the South Port have been moving forward. However, the South Port Group determined the Plan no longer matches Dubuque citizen preferences. The South Port Group, in conjunction with the City of Dubuque, found the current viewpoint on how/if the South Port should be redeveloped no longer calls for residential mixed-uses as is detailed in later sections of the report.

CURRENT SOUTH PORT CONDITIONS AND OPPORTUNITIES



Current South Port Status

Land Use

The South Port consists of 33 acres situated between the Ice Harbor, the Mississippi River, and the Canadian Northern Railroad. As previously mentioned, people see the South Port coming into the city from Illinois and some consider it underutilized. Currently, several land use characteristics of the South Port make possible redevelopment a challenge. The characteristics include: accessibility, the Canadian Northern Railroad, the current infrastructure, and brownfield concerns.

Accessibility

Accessibility is the greatest challenge facing the future of the South Port. Currently, the main access point into the South Port is Jones Street from US-151/US-61. Jones Street crosses three rail tracts entering into the South Port. Train cars frequently block Jones Street, sometimes for hours on end. Secondary access is from Ice Harbor Drive. This road comes around the west end of the Ice Harbor, connecting the North and South Port. Ice Harbor Drive is a narrow drive entering the South Port. The drive serves pedestrians and emergency vehicles, not allowing access for trucks. This causes difficulties for trucks to enter and exit the South Port when Jones Street is blocked by rail cars.

Pedestrian access is nonexistent to and within the South Port. Streets are a mix of concrete and gravel with no sidewalks. No pedestrian cross walks exist over US-151/US-61. Pedestrians cannot easily walk from the downtown area to the South Port or from the North Port to the South Port. Future developments

will need to address how to move people in and around the South Port.

Zoning

The Port of Dubuque has been zoned for industrial use since Dubuque's founding. Although the 2002 Port Master Plan has rezoned the South Port from high industrial to mixed-use, the Port is still industrialized. The following pictures show several industrial uses currently in the South Port.

Industrial Business in the South Port



Industrial Use in the South Port



The Port of Dubuque 2002 Master Plan regulates both existing and future development. The North and South Port were separated into two zones under the Port of Dubuque Planned Unit Development (PUD) zoning with two sets of regulations: design standards and a PUD zoning ordinance.

For the South Port, the PUD regulates expansion and reconstruction of existing uses for changes and new construction but allows for existing uses to remain the same. The Design Standards regulate the design of new construction while existing structures remain unaffected. Lastly, the Performance Standards regulate the appearance of existing outdoor storage facilities.

Industrial Storage Tanks in the South Port



Railroad

The South Port is bordered by a rail switch yard on the south and west, as shown in the picture below. The rail is owned and operated by Canadian Northern. Railroad operations are federally protected giving little power to local governments to plan and acquire property for redevelopment. In some cases, negotiations can take place that significantly benefit the rail companies business operations, in which rail operations can be moved. In Dubuque, Canadian Northern has said they are in support of South Port redevelopment. However, their operations at the current switching yard location are vital to the overall rail operations and they are not willing to move their operations.

Rail Switch Yard Near the South Port



Floodwall in the South Port



Infrastructure

There are challenges with the floodwall and roads in the South Port. The floodwall is unsightly and restricts access to the river. The floodwall will have to stay in some capacity. Many options can make the floodwall less restrictive. For instance, the floodwall in the North Port was buried, creating a flood berm, which allowed for a walkway with lighting placed above the wall.

Many of the roads have slowly deteriorated over time. Currently, several roads are gravel/dirt or have not been repaved for many years, giving an impression of blight to the South Port. Many of the roads also lack sidewalks.

Street Conditions in the South Port



Private

The firms that own property in the South Port include: Newt Marine with 1.74 acres, Molo Oil Company with 1.16 acres, Sunflower Enterprises LLC with 2.13 acres, and DRBE Properties LLC with 1.29 acres. The firms are detailed below (Beacon, 2012).

South Port Property Owners by Acres

Property users	Area		The Ice Harbor lease (acres)
	Acres	%	
City owned property	16.96	51.4	
DRBE Properties LLC	1.29	3.9	
Dubuque Terminals	2.93	8.9	2.81
Molo Oil Company	1.16	3.5	
Garu Newt/Newt Marine	1.74	5.3	
State of Iowa	1.27	3.8	
Sunflower Enterprises LLC	2.13	6.5	
United States of America	0.93	2.8	
Rail way	4.59	13.9	
TOTAL AREA	33	100	2.81

Source: City of Dubuque, 2012

Newt Marine: Created in 1965, Newt Marine Service is a reliable marine service industry. Their services include marine construction, dredging, dry docking, barge rentals, and specialized towing, among others. Newt Marine employs more than 50 individuals with annual sales over \$10 million.

Molo Oil: Molo Companies can be traced back to 1870 when Bart Linehan, a native Dubuque owned and operated a transfer company. In 1926 Molo Oil Company began selling petroleum products such as fuel oil to home owners and gasoline to 22 area service stations. The firm expanded further into Iowa, Illinois, and Wisconsin during the 1970’s. The 1980’s was an era of growth and Molo Oil began opening Big 10 Mart’s – convenience stores. Currently Big 10 Mart’s has 16 locations throughout Iowa and Illinois. Molo Oil’s merchant petroleum wholesale sector employs more than 20 individuals with annual sales over \$50 million

Sunflower Enterprises LLC: Sunflower Enterprises, LLC possesses a large and diverse fleet of marine equipment. Sunflower Enterprises rents and leases marine equipment. They supply barges, tugs, or support materials such as winches or cranes, among others. Sunflower Enterprises employs only a few employees with annual sales over \$500 thousand.

Mutual Wheel: Mutual Wheel Company has eleven locations in Iowa and Illinois. Mutual Wheel is a full-service parts department and service facility. Mutual Wheel serves a small but important role in Dubuque. Over ten employees are employed by Mutual Wheel with over \$2.5 million in annual sales.

Public/Federal

The City of Dubuque owns approximately 1/3 of the land in the South Port. Some of the City’s property is leased to businesses, such as Dubuque Terminals (shown in the table to the left) and will be transferred back to the City once the lease is terminated. The Coast Guard owns approximately one acre of the land as well and will remain at the current location. Much of the open

area in the South Port is used by the City to dump snow. Other locations will have to be explored upon redevelopment in the South Port.

Case Studies

In continuation of the information gathering process, the South Port Group researched the redevelopment of port areas with attributes similar to the South Port. In all, seventeen redevelopment plans were examined ranging from Mississippi River projects to Western European port redevelopments¹. Of these seventeen plans, take-a-ways from three of them were reflected on when considering redevelopment possibilities. These include Sioux Falls, South Dakota; Stoughton, Wisconsin; and Wausau, Wisconsin. Each of the redevelopment efforts provide insight into planning processes capable of reimagining former industrial port areas into vibrant riverfronts suitable for today's central business districts.

Several notable practices assisted in the planning process for the South Port. For instance, Sioux Falls used persistent public engagement to help build excitement for their redevelopment project with an open house brainstorming session to generate land use ideas, a second design meeting to evaluate land uses, and a land use matrix to track feasibility, type of land use, and implementation. The South Port Group took lessons from Sioux Fall's challenges and combined successful elements from other case studies to create an inclusive public engagement strategy capable of being undertaken and

producing actionable results within a year. The public engagement process is discussed in detail later in the report.

The Port acts as the gateway to Dubuque. Sioux Falls, and several other cities examined, determined a bike path was the most economically feasible way to maintain public access to the riverfront. Case studies suggest connecting Dubuque's own riverfront bike path to the Mines of Spain could be popular.

Other cities also recognized the importance of analysis in addition to public input. To gauge the feasibility of establishing an artist's district in Stoughton, staff conducted interviews with local landowners asking them a series of questions about their business intentions and perceived strengths and weaknesses of the riverfront area from a commercial perspective. Additionally, developers were interviewed about development feasibility and specific land uses they believed to be viable. A similar land use analysis for the South Port is detailed later in the report. For more detail on the redevelopment process taken in the three cities refer to Appendix B.

¹ Chicago's Riverpoint Park, Sacramento Port, Downtown Rutland, La Crosse WI, Lincoln's West Haymarket, Keating Channel, Manitowoc, Philadelphia's Schuylkill, Hoboken Terminal & Yard, Minneapolis Riverfront, Sacramento Santa Fe Railyard, Sioux Fall's downtown,

SOUTH PORT OF DUBUQUE PUBLIC INPUT



Dubuque Impetus for Moving Forward

The America Rivers project has been under consideration by the community since 1995 and continued to be one of the City's top priority projects in 2010. More than 10 years have passed since the first public-private partnerships were inaugurated to create the 2002 Port Master Plan. Since then, the riverfront has become a growing part of community life for Dubuque and the face of economic development in the area. The partnership achievements at the base of this process have created an important image of the City and its future. This section presents some of the results from that review.

Upper Mississippi River Conference Charrette

The City of Dubuque has taken some actions to support the next stage in implementing the redevelopment of the South Port. One such action included the help of the Upper Mississippi River Conference in the spring of 2012 to organize a charrette with outside experts to review development possibilities for the South Port. The charrette rapidly explored different design opportunities and suggested possible planning solutions for Dubuque. Participant disciplines included environmental engineers, architects, city officials, students, educators, and those interested in the health and the vitality of the Mississippi River,

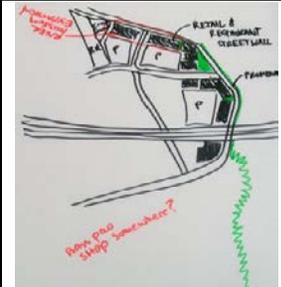
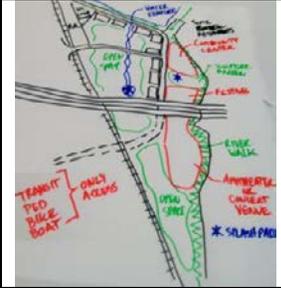
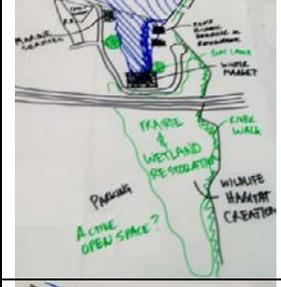
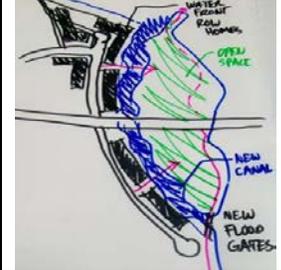
Conference participants conducted a SWOT analysis of the site. They underlined the strengths of the site, which included its location, partnership arrangements, collaboration of stakeholders, and legal environment. The strengths are the result of City actions during last decade to implement the first phase of the redevelopment plan.

Some of the weakness and threats facing the South Port remain from the previous analysis of the entire Port of Dubuque in 2002. They include, among others, the lack of public awareness of the site due to few visitors and its poor accessibility.

The ability to hold festivals on the site and the development of a profitable market place remain two of the main "opportunities" for potential use of the site. Use of the area as a park, place for leisure activity, and potential landmark for the City were among the development opportunities most considered. The development of residential areas was not identified as one of the most important opportunities for use of the site during the expert analysis. Issues related to potential flood levels (i.e. 10 to 12 feet), brownfield remediation, and the potential negative impact of the current economic situation may all result in higher project costs and less revenues. The analysis revealed the project implementation process by the City has changed since the Port Master Plan was first prepared and the North Port development started.

Based on the results of the SWOT analysis, experts created four alternative proposals for the South Port. Several ideas in the proposals were similar to those in the Master Plan. For example, all of the proposals include walking trails along the river and open spaces. The differences between the proposals and the Master Plan lie in the suggested location and scale of activities. In addition, all of the proposals, except for Proposal 1, have included development along the water channel as a key feature. Below are the main ideas of each proposal:

UMRC Proposed Land Uses

	<p>Proposal No 1</p>	<p>Initial plan</p>
	<p>Proposal No 2</p>	
	<p>Proposal 3</p>	
	<p>Proposal 4</p>	

Source: Upper Mississippi River Conference (2011)

- Proposal 1 suggests mixed-use development and geographically divides the area into two main land uses: the north part for residential and commercial use and the south part for public recreation.
- Proposal 2 suggest that the site by used mainly for parks and leisure activity with the development of a community center. The site needs to be accessible to children and families.
- Proposal 3 suggests keeping the river based businesses while using the rest of the site for park and leisure activity such as boating, fishing and wildlife development.
- Proposal 4 suggests preserving the view of the river and using land along the river for low rise housing based on the housing needs of employees from industries such as IBM. The proposal also takes noise abatement into consideration

Overall the experts’ common views emphasized transportation and accessibility issues of the site, water front and wildlife development, and suggested that land could be used for residential and/or retail development with community/cultural development and interaction. The charrette provided useful information, however, included little involvement from citizens of Dubuque which is essential before implementing any planning actions in the South Port.

Future Transportation in the South Port

Other plans in Dubuque will also affect future development in the South Port. Transportation plans provide information on major future projects. The Dubuque Metropolitan Area Transportation Study (DMATS) provides the basis for managing the transportation system of the area for the next 30 years. The DMATS 2040 Long-Range Transportation Plan was adopted in 2006 and updated in 2010 to support Dubuque's Sustainable Initiative and aligns the transportation system with the principals of sustainability (Ch. 3, p. 41)

There are two planned projects in the long range plan for development in the Port:

- US 20 Julien Dubuque Bridge replacement with total cost of \$194.4 million. According to the Iowa Department of Transportation, some federal funds are secured and the bridge will be constructed upon approval of additional funding.
- 7th Street reconstruction with bicycle and pedestrian access is planned and listed in the real project list with a total cost of \$2.4 million.

DMATS Long Range Transportation Plan



Source: DMATS 2040 Long-Range Transportation Plan Chapter 5, 2012

Discovering New Land Use Preferences

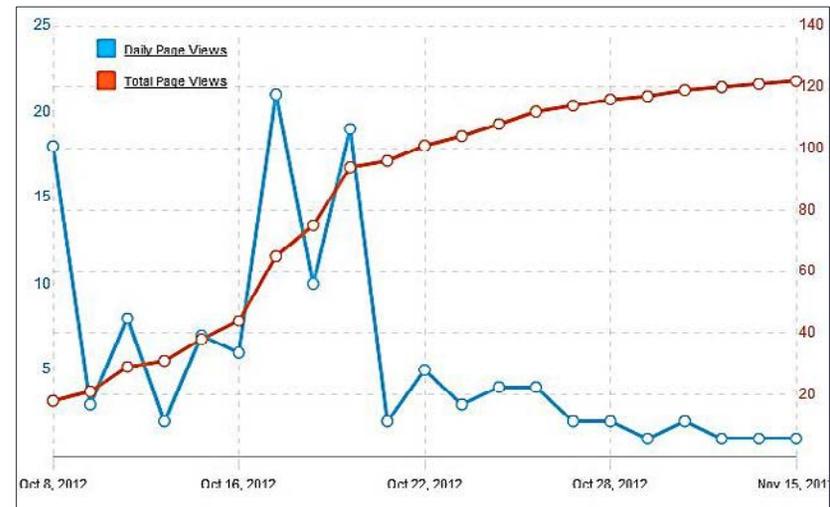
South Port Public Input Session

The project statement intends to discover the highest and best use for the South Port. Public opinion comprises a major component of the highest and best use for development in the South Port. There are several manners in which to gauge public opinion. The group considered different public engagement options including charrettes, focus groups, and group brainstorming. After reviewing the public input process within the previous case studies, the Group concluded that group brainstorming was the most suitable format for input on the South Port. Group brainstorming provides the best way to engage the largest number of stakeholders in a relatively short amount of time. The preference was for a larger quantity of ideas from a larger crowd.

Marketing

Marketing of the event was vital to its success. The Group utilized social media including the City of Dubuque's website with a link to an RSVP website with more information.

RSVP Website Activity, Oct. 8 – Nov. 15, 2012



Source: Eventbrite.com

Local news stations KCRG and KWVL, and the Dubuque Telegraph Herald, ran stories about the City's role in the redevelopment of the South Port. All included an invitation to the event. If participants were unable to attend the event, but wished to give input, they were able to through the City website.

Direct invitations were emailed to business owners in the community through the City's contact lists. Group members made direct calls and emailed approximately forty owners of businesses in the Port area. The three local colleges in Dubuque were also contacted about the event in order to gain more participation from young residents in the community.

Session Logistics

The first event was held at the Grand River Center in Dubuque on October 25, 2012. The facility worked well due to its location in the North Port, available parking, and ample meeting space.

In order to split groups up as they arrived, guests were asked to sign in with their name and email address in the order that they arrived. Each participant was asked to sit at an assigned table. In order to facilitate conversation, round tables were used with up to eight people per table. Each table had a facilitator, either a member of the South Port Group or a project partner. A discussion guide was created prior to the event with questions intended to spark conversation and ideas. Example questions are listed below (Appendix C contains a copy of the discussion guide):

- What activities do you wish you could do in the South Port?
- What existing South Port attributes should be utilized?
- How can the South Port portion of the river be better utilized?
- Is river access important to you?
- What river activities would you like to be able to do?

The agenda for the event included a 15-minute introductory presentation that covered the following topics:

- History of the Port
- Current conditions of the Port
- Examples of other successful port redevelopments
- Explanation of barriers to South Port redevelopment
- Rules of engagement

Following the presentation was an hour of group brainstorming. The night concluded with individual table presentations to the entire group of the top ideas discussed. Each participant was given an exit survey to record the ideas they preferred the most.

Political Scape

The 2002 Master Plan resulted in a rezoning of the South Port area from light industrial to mixed-use. Lawsuits ensued after the change of zoning. The lawsuits have since been settled, but some political issues remain that must be addressed by the City to ensure successful redevelopment. After the initial presentation, the group fielded questions and comments. The first comment was from an owner of three businesses located in the South Port, speaking about the 100+ jobs that are located in the South Port and the effect that redevelopment would have on those jobs and others associated with the South Port. He asked that if the City redevelops the area, citizens think big and focus on increasing the tax base to make it a worthy venture.

Also attending the event, but not participating, were two representatives of the U.S. Coast Guard. Due to their location in the South Port they wanted to have knowledge of plans but chose not to speak on behalf of the Coast Guard.

Public Brainstorming Session, October 25, 2012**Results**

Approximately 65 participants attended the event. They came from a variety of backgrounds including business owners, developers, city staff, and residents. This variety of participants resulted in 67 ideas for the redevelopment of the South Port. The ideas range in size and land use, but are organized into seven general categories based on the frequency of responses:

- Outdoor Activities
- Entertainment
- Water Related Ideas
- Existing Use
- Transportation
- Museums
- Development

The results of the session were organized first by the top preferences of each of the eight groups, and then by the survey results of individual preferences. The graph on the next page shows the results of the individual survey. As indicated by the legend, each color represents a different category of land use. The bubble size indicates the total number of land use mentions.

The following table shows numerically the results of the individual preference survey completed at the end of the brainstorming event. The frequency column indicates how often an idea from each category appeared in individual's top three rankings. Each category will be explained in detail in the following section.

Brainstorming Session Survey Responses

Category	Frequency
Transportation	43
Entertainment	28
Development	21
Water Related Ideas	18
Outdoor Activities	16
Museums	11
Existing Use	8

**Public Input Session Idea Generation
Focus Group Land Use Survey**



In comparison with the 2002 Master Plan, the results of the event found several citizen preferences in line with zoned uses in the 2002 Master Plan. The 2002 Master Plan focuses on mixed-use development that allows for several types of development including those listed below:

- Office/Showroom
- Institutional
- Commercial/Retail
- Entertainment
- Public
- Medical Office
- Hospitality
- Restaurant/Café
- Residential-Attached/Multi-family

Transportation related development was the most frequently occurring type of development ranked in the top three preferences of event participants. The transportation category includes a bridge over the Ice Harbor floodgates. Sixteen participants ranked having a bridge over the floodgate in their top three preferences for redevelopment. The 2002 Plan includes an extension of the river walk across the top of the Ice Harbor floodgates and into the South Port. This is illustrated in the Pedestrian Circulation Plan Map.

2002 Pedestrian Circulation Plan Map



Source: 2002 Port of Dubuque Master Plan (Pedestrian Circulation Plan)

Other acceptable forms of redevelopment according to the 2002 Master Plan also rated in the top three by individual surveys include entertainment, mixed-use development, and museums. Twenty-eight individuals ranked entertainment uses in their top three preferences. Twenty-one individuals ranked mixed-use development in their top three preferences. Mixed-use development included hotels, restaurants, residential, and commercial space, which are all acceptable uses.

Categories that are not included in the 2002 Plan but were ideas expressed at the event include water-related activities, such as creating a canal, and keeping existing uses. Existing uses would not be compatible with the 2002 Master Plan or the current PUD zoning. Outdoor activities are also not compatible with the 2002 Plan, but were ranked in the top preferences for 16 individuals at the event. Outdoor activities include more parks and green space. The 2002 Plan only has 3.1 acres in green space, which is split between the north and south ends of

the South Port. One idea in the outdoor activities category was to incorporate more trees into the South Port, which is incorporated in the 2002 Plan depicted below. The language under Sidewalk Landscaping in the 2002 Plan includes, “Where present, all front yard areas shall be landscaped with trees, shrubs, ground cover, and turf grass.”

2002 Illustrative Plan Map



Source: 2002 Port of Dubuque Master Plan (Illustrative Plan)

Concluding Table Presentations to the Overall Group



Expressing Ideas on Aerial Maps of the South Port



Transportation/Trail Connectivity

Transportation and trail connectivity was the most popular land use category. Installing a bridge over the floodgate proved to be the most popular idea of the night according to the individual surveys. A pedestrian bridge over the floodgate would create connectivity between the North and South Ports. Other transportation related ideas included different versions of trail expansion such as extending the current trail to the Mines of Spain and making the trail “rustic” in nature. Extending the trail to the nearby Mines of Spain recreational area had several votes. The Mines of Spain recreational area is approximately four miles southeast of the Port, along the Mississippi River. The third idea is for a general trail expansion for both bike and pedestrian use. The extension would include a connection with the North Port and extending to the south of the South Port.

Current Trail on the South End of the South Port



Water Related Ideas

Water related redevelopment in the form of a canal was a popular idea. Several maps were sketched showing examples of how the canal could be cut into the South Port. Other water related redevelopment included a fishing pier, and beach access. An online participant had the following input:

“I believe a beach that could be accessed by land would get a lot of use by those without boats as well as by the many boaters of the Dubuque area. Bathrooms would make it even more attractive. The Dubuque area has much less beach areas than neighboring river pools.”

Entertainment

The brainstorming resulted in many ideas related to entertainment. The most popular ideas were an amphitheater, general recreation space, and a Wisconsin Dells-like water park. One group suggested that musical performances take place on a barge while the audience watches from an amphitheater in the Port.

Other entertainment related ideas included a Ferris wheel, “World Class” festival grounds, go karts, and a skate park. There are several examples of other successful waterfront entertainment venues similar to these. Arnold Park next to Lake Okoboji is an example of a successful amusement park. In the summer of 2012 Seattle, Washington opened a Ferris wheel along their waterfront with great success.

Example Canal into the South Port Area



Source: City of Dubuque, South Port Group, 2012

Keep Existing Businesses

Many individuals voted to keep the status quo. They want to support the businesses that are currently located in the Port by keeping them in their current location. Some participants suggested the South Port capitalize off of unique businesses like Newt Marine, using them as a point of interest for the City.

The existing businesses could remain and beautification measures could improve the appearance of the South Port.

A citizen gave the following feedback via the City website on their opinion of the existing businesses in the South Port.

“I also believe that Newt Marine should be kept going down there if at all possible. It is so much a part of our river heritage.”

Newt Marine in the Ice Harbor



Development

Waterfront development such as restaurants, hotels, and retail space were popular ideas. Waterfront restaurants received many individual votes. One restaurant example mentioned was a moving rail car restaurant with a railroad theme.

Residential development was also discussed. Mixed-use development could serve both retail space and residential dwellings. One group felt mixed-use would be an appealing option for retiring citizens in Dubuque who wish to downsize their homes.

Maximizing the view and access to the river was important to many attendees. It was deliberated that this could be done through infill of the floodwall, similar to the North Port levy.

Example of a Rail Car Restaurant



Source: <http://pictures.4ever.eu/transportation/trains/orient-express-160263>

Museums

Several people preferred to include museums in the South Port redevelopment. Examples include a train museum, a Coast Guard museum, and a museum highlighting the industrial heritage of Dubuque. The train museum in particular was a popular choice. Dubuque has a long history with the railroad

dating back 150 years. A train museum would honor the railroad's heritage and legacy in Dubuque.

Other museums or monuments that were discussed included a Coast Guard Museum with a monument honoring local lives lost during the September 11, 2001 terrorist attacks. Another citizen gave the input of a general industrial period museum:

"I like the idea of having a museum that features Dubuque's industrial period when it was the fastest growing industrial town in the Midwest. Deere would be included as well as the businesses that were in the millwork district and all over downtown."

Outdoor Activities and Green space

Another option for redevelopment includes parks and green space. One group introduced the idea of rooftop gardens for buildings in the South Port and it proved popular with many individuals. A citizen had the following opinion on the need for green space near the river and keeping the waterfront open for all residents:

"I think it will be important to keep the spaces along the waterfront available to the general public and not so much for residences and private offices. Some attractive green space along the water with fountains and perhaps some restaurants or eating places of some sort nearby would open this space to many and would also create an attraction for visitors. As more of our downtown area is renovated for residences, the more the need for some more downtown green space is needed."

Example Waterfront Park



Source: <http://www.planning.org/greatplaces/spaces/2012/>

2013 South Port Land Use Survey

The next step in gathering public input came in the form of a public survey. The survey reached a broader range of citizens than the first public brainstorming session which served as the basis for questions asked on the survey. It is safe to assume that many people that attended the session had a significant stake in the South Port area and may have biased opinions. The questions on the survey were meant to determine whether the broader public shares the same preferences as those whom attended the session.

Methodology and Demographics

The land use survey questions focused first on citizens' general land use preferences and then honed in on specific preferences

within each land use category. Other questions focused on getting a pulse for peoples' preferred feel and style for a revitalized South Port.

The survey was distributed via convenience sampling through links on the Dubuque City and Dubuque Telegraph Herald websites. The survey opened to the public on January 8th and closed February 4th, 2013. A time series analysis of sample questions was completed along with implementation of Qualtrics' Ballot Box Prevention tool to prevent manipulation of results. A total of 510 surveys were started, with 364 being completed, for a completion rate of 71%. Detailed percentages, means, and sample sizes for the land use questions are provided in Appendix D.

Demographic questions were included in the survey to establish a point of comparison with 2010 City of Dubuque Census data and evaluate the survey for sources of bias. The survey demographics closely mirrored the Census in regards to age and zip code. Additionally, over 94% of survey takers had resided in Dubuque for two or more years indicating those surveyed had a broad understanding of Dubuque. Males and highly educated Dubuque citizens were, however, over sampled as seen below. While not intended as a scientific survey, the sample could be perceived as relatively representative of Dubuque's populace. Under this assumption, most responses numerical averages, depending on individual standard deviations, could be considered accurate within approximately one fourth of a point. Refer to Appendix D for the full statistical analysis. The following section describes the results of each question.

Respondent Demographics

Answers (n=361)	Census	Survey
Dubuque Metro Median Age	38 (All Ages)	41.5 (18>)
Dubuque Metro Percent Male	48.4%	60%

Respondent Residences

Population per Zip Code in Dubuque County (n=367)	Census	Survey
52001	46%	50%
52002	15%	19%
52003	14%	19%
52068	4%	2%
Other	20%	10%
Total (n=367)	100%	100%

Respondent Education

Educational Attainment >25 (n=351)	Census	Survey
High school graduate or less	35%	6%
Some college, no degree	20%	15%
Associate's degree	7%	13%
Bachelor's degree	18%	40%
Graduate or professional degree	10%	26%

Survey Results

83% of survey takers had been to South Port at least once in the past 5 years and 68% considered themselves at least somewhat familiar with the South Port area.

Question 1: How familiar are you with the South Port?

Answers (n=502)	
I have never been to the South Port	6%
Very unfamiliar	11%
Somewhat unfamiliar	14%
Somewhat familiar	43%
Very familiar	25%
Total	100%

Question 2: If you have been in the South Port in the last 5 years, why? (Choose all that apply)

Answers	
I work there	4%
To access the bike path	30%
Curious	43%
Other, please specify²	15%
To access the river	20%
To view the trains	14%
To view the barge activity	14%
I have not been in the last five years	17%

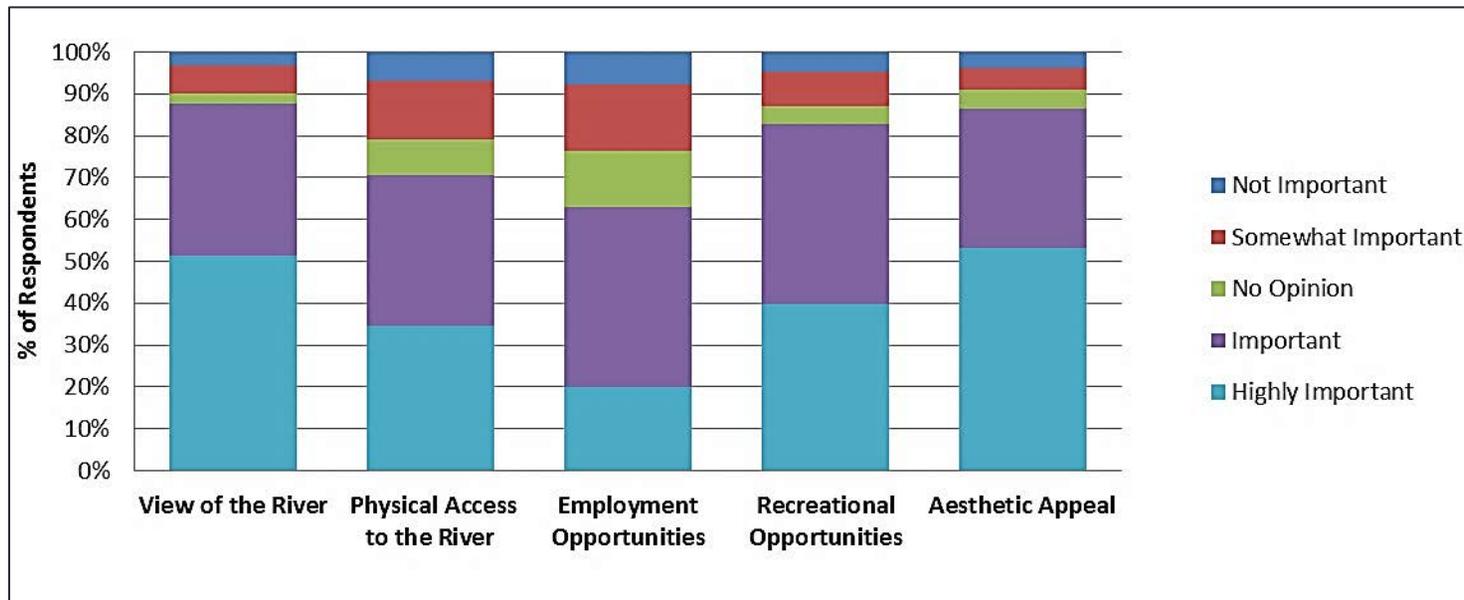
² Most people responding *Other* had traveled to South Port to fish, run, ride bikes, or to satisfy curiosity.

Land Use Preference Results

Question 3: Please rank the level of importance of the following: view of river, river access, employment opportunities, recreational opportunities, aesthetic appeal.

Of the five aspects survey takers were asked to evaluate, a majority identified the view of the Mississippi and the aesthetic appeal of South Port as highly important. Overall survey takers were concerned with all five aspects.

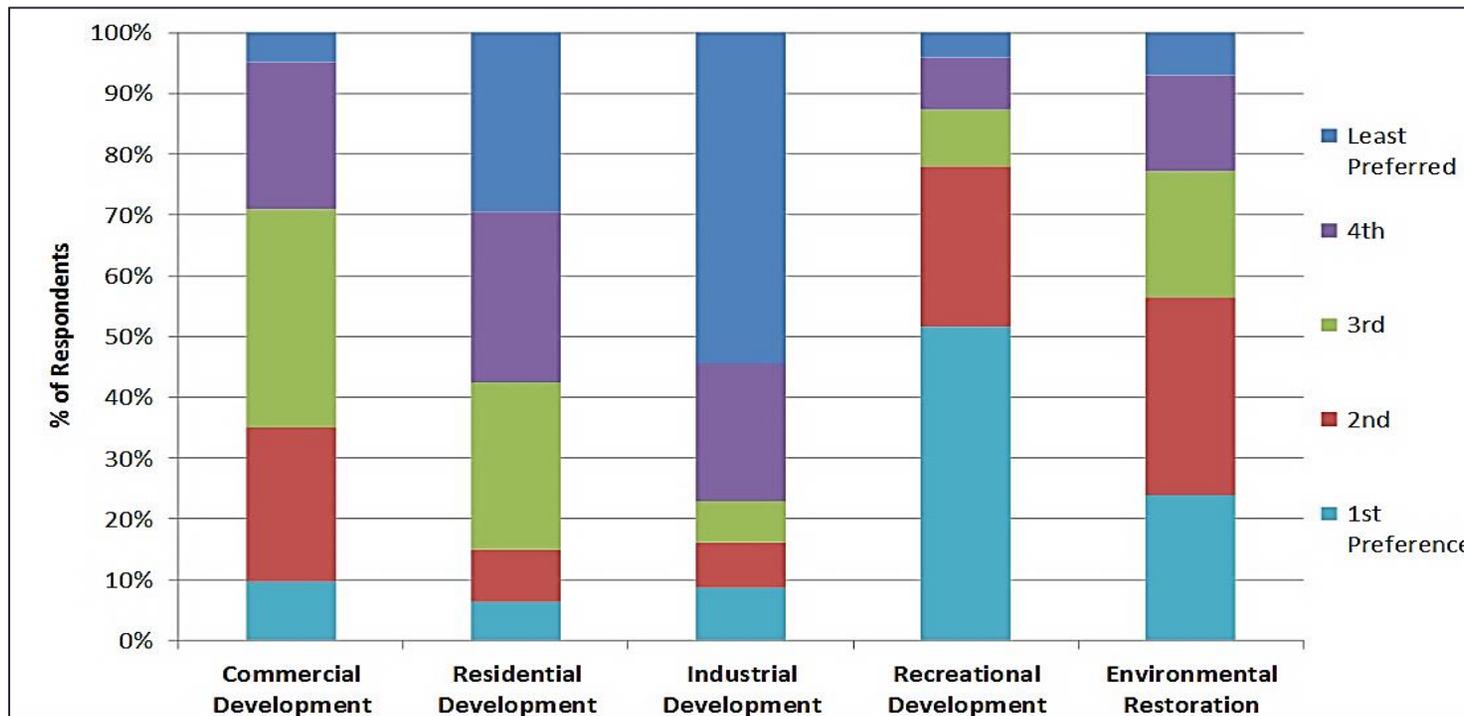
Level of Importance



Question 4: *What main use would you prefer for the redevelopment of the South Port? (Rank from 1 being the most preferred to 5 being the least preferred)*

Survey respondents were required to rank at least three land uses, with the ability to rank all five. Over 50% of survey takers identified recreational development in South Port as their primary preferred land use with over 75% listing it within their top two preferences. Environmental restoration was the second highest ranked preference with commercial development third. The majority of survey takers identified industrial development as their least preferred primary land use.

Main Land Use Preference



Question 5: *What combination of uses, (if any) would you prefer? (Check all that apply)*

When considering multiple South Port land uses, again those surveyed identified recreation as their top preference. However, water related entertainment uses edged out natural restoration as the second highest ranked preference.

Answer	% Choosing
Nature Restoration (re-creating native habitat along the water's edge)	60%
Outdoor Recreation (ball park, amphitheater, festival grounds)	70%
Water Related Entertainment (fishing pier, boat docks)	64%
Museums (railroad or Coast Guard)	39%
Commercial Development (retail, hotels, movie theater, restaurants, bars)	53%
Industrial Business (marine services)	19%
Other, please specify ¹	9%
Residential Development (single family homes, multi-family homes)	19%

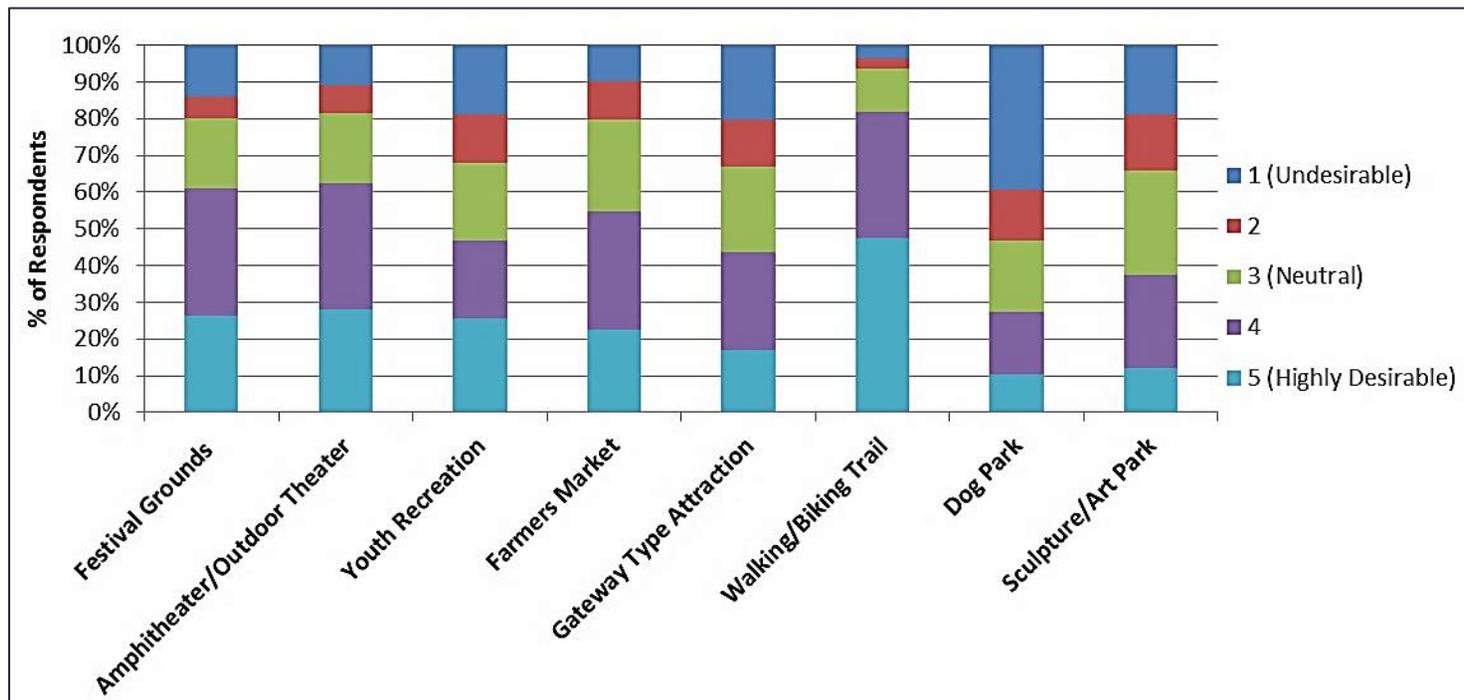
¹ Several comments that encompass the idea of reoccurring themes include: “Maintain small pocket of river related industrial activity so as to preserve the gritty industrial harbor appeal.” “Beauty & nature should prevail but a combination of uses if done aesthetically is a model of good design: nature AND people can live together.” “Use the rail spur and the river harbor for industrial use to increase tax base. After all we are a working river. Visitors should see active trains, coast guard, and industry co-existing with the recreational other side of the harbor.” “City Recreational Health/Indoor Aquatic Area. Walking track around the amphitheater. Wall of windows to enjoy view of Mississippi while water-walking

Recreational Development

Question 6: *If you are interested in other outdoor recreation in the South Port, which features would you like to see? (Rank with 1 being undesirable and 10 being highly desirable)*

Recreational development was the top choice for primary and combination land uses. Nearly all survey takers answered question 6 on the thought of specific recreational development. A riverside walking trail, which many commented would ideally extend to the Mines of Spain, saw 80% in favor. Festival grounds, an amphitheater, and a farmers market also enjoyed significant majority support. Those surveyed were less enthusiastic about a dog park, youth recreation, or an art park although all had pockets of enthusiasm. Many *Other* comments encouraged consideration of a ball park.

Recreation Related Development Preference

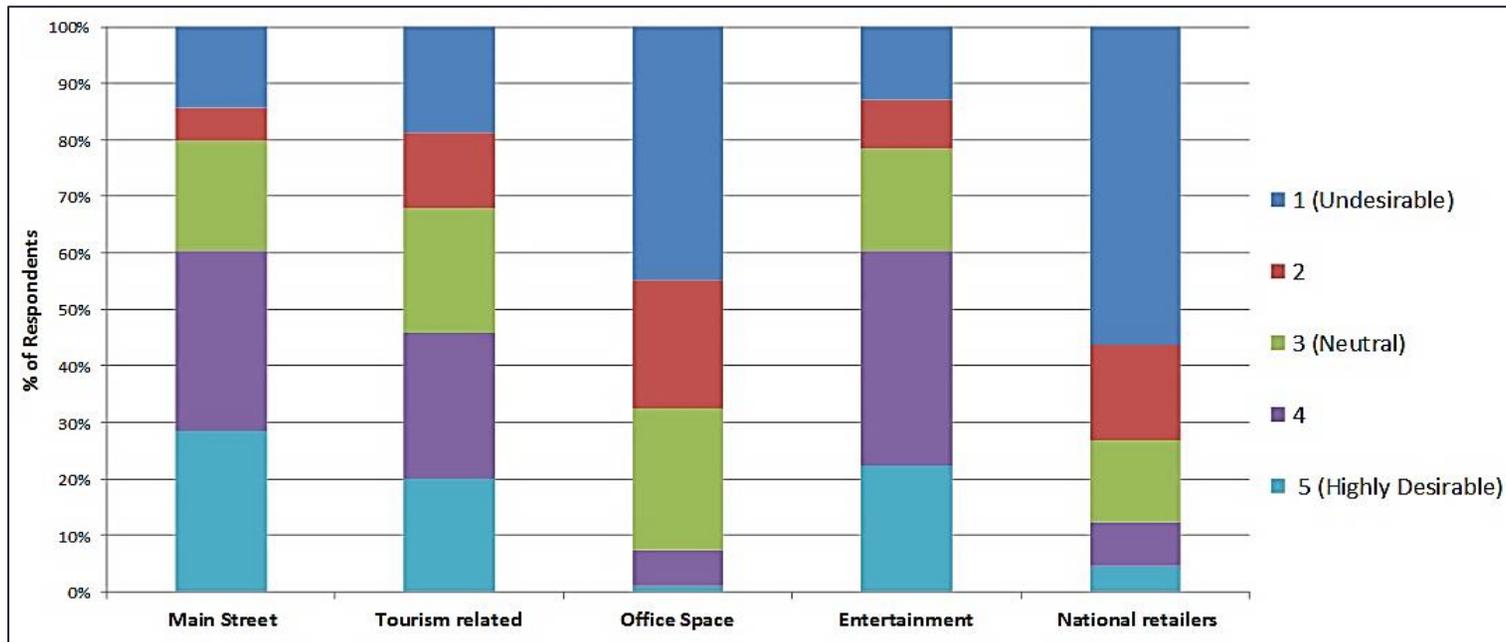


Commercial Development

Question 7: *If you are interested in commercial development, what would you like to see? (Rank with 1 being undesirable and 5 being highly desirable)*

Of those completing the survey, 89% answered question 7 on the idea of South Port having some commercial land use. Of these 89%, 60% viewed Main Street and Entertainment type development as favorable. Tourism related development garnered moderate support while National Retailers and Office Space were undesirable. Those responding *Other* often indicated a preference for no commercial development. Others commented, “Shopping in Dubuque needs to be vastly improved. Asbury has all the chains. We need to encourage local commercial growth. Space for a farmer's market would also be nice.”

Commercial Related Preference

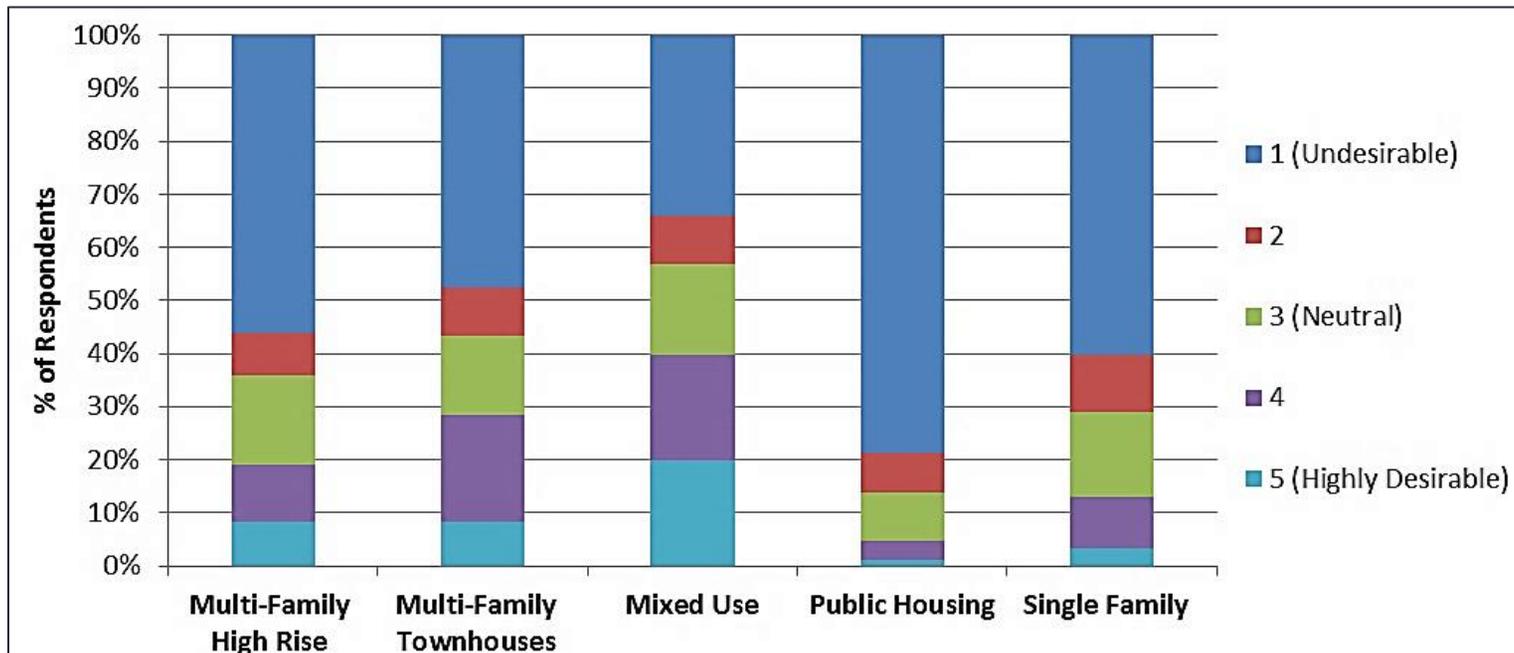


Residential Development

Question 8: *If you are interested in residential development, which types of housing would you like? (Rank with 1 being undesirable and 5 being highly desirable)*

Of those completing the survey, 89% answered question 8 on the idea of specific residential land uses. However, when asked about specific types of residential development no use received a majority support. The vast majority of those responding *Other* also indicated they wished to see no Residential Development in South Port. A limited few specified wishes for other types of residential develop such as, “nice riverfront condos that didn’t ruin the view for others ... not necessarily high rise. And DOG friendly, unlike other high end condos in DBQ”

Residential Development Preference

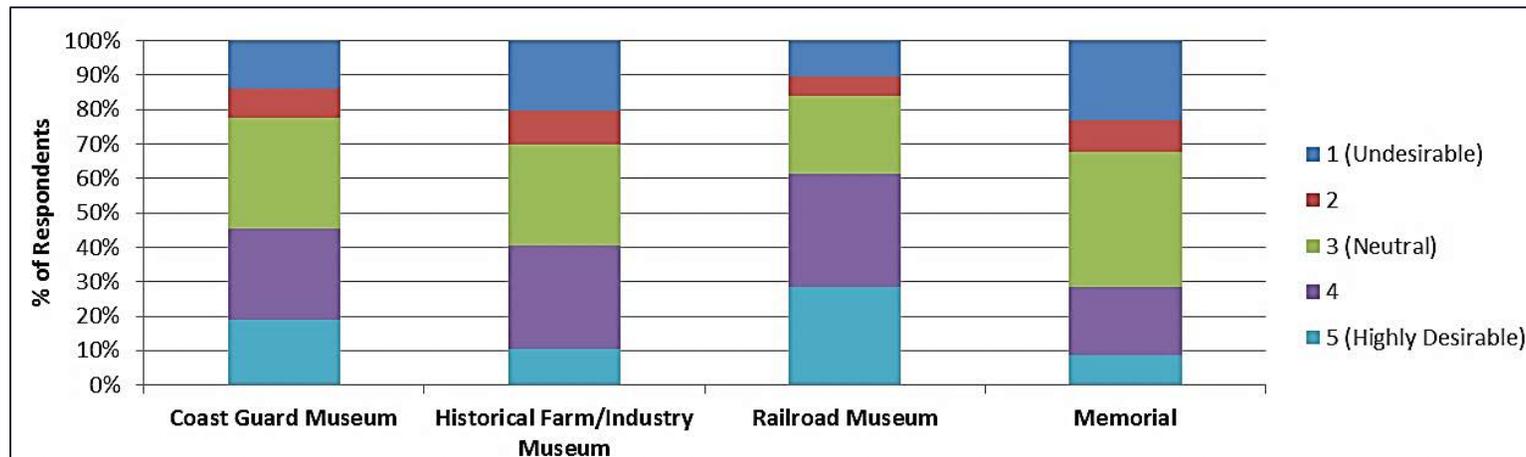


Museum Development

Question 9: *If you are interested in museums, what would you like to see in the South Port? (1 being undesirable and 5 being highly desirable)*

Although not one of the five broad land use categories, museums were a reoccurring idea in the public brainstorming session. Of those completing the survey, 81% answered question 9 on the idea of a specific museum in the South Port. Of those 81%, 60% supported a railroad museum with all other museum choices failing to attract majority support. Overall, many respondents were neutral to the idea of a museum in South Port. Of the few *Other* comments submitted one suggested a “Viewing platform tied to the river walk overlooking the marine services operation in the Ice Harbor. Also could offer information in kiosk or other form explaining barge related activity.”

Museum Related Development

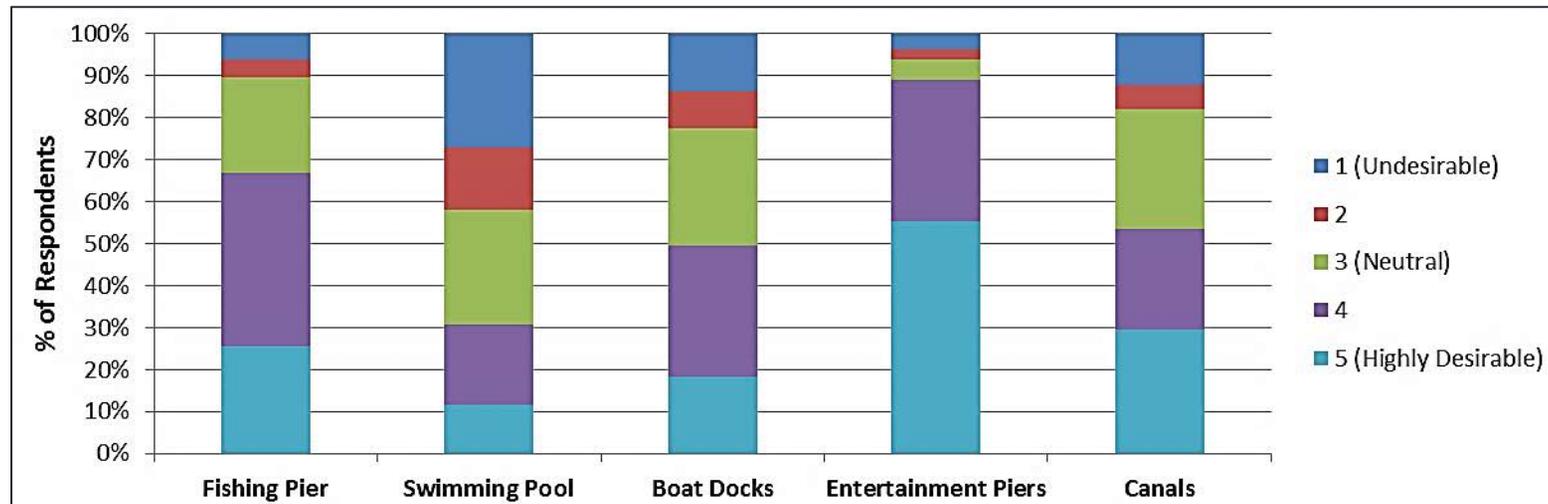


Water Related Development

Question 10: *If you are interested in water related activities, what redevelopment element would you like? (1 being undesirable and 5 being highly desirable)*

Water related development, while not one of the five broad land uses initially put forth, had several specific uses that enjoyed high levels of support in auxiliary capacities. 95% of those surveyed provided input on specific water related development types. Piers for entertainment related activities and for fishing were supported by 89% and 67% respectively. It is worth noting, the feasibility of creating piers is unknown. However, the survey results suggest further investigation may be warranted. A South Port canal, another idea that's practicality is not entirely known, also gained majority support. Other suggestions included; "Natural looking access to the waterfront, limestone steps, leave walking path up higher " and "Trails, Indoor recreation/fitness facility (indoor rock climbing wall), kayaking/canoeing, winter water related activities."

Water Related Development

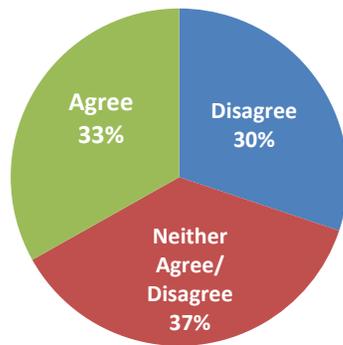


Industrial Development

Question 11: *Dubuque should investigate the viability of developing South Port as an area suitable for businesses looking to take advantage of the port and rail transportation available in South Port.*

Respondents were ambivalent on the question of whether Dubuque should investigate South Port’s attractiveness for new industrial business.

Industrial Development



Transportation

Question 12: *Would you be interested in utilizing any of the following types of transportation options in the South Port if they were implemented? (Check all that apply)*

Broad support was again indicated for bike trail expansion from North to South Port as well as to the Mines of Spain.

Other frequent comments included developing a trolley system between South Port and North Port.

Transportation Development

Answer	% in Favor
Trail over Ice Harbor flood gate connecting South and North Port	80%
Trail extension to the Mines of Spain	80%
Trail to the historic Millwork District	65%
Bike share station in conjunction with I future downtown program	42%
Vehicle overpass into the South Port over the railroad tracks	54%
Other, please specify	6%

Survey Summary

Overall, the broader public input gathered from the online survey showed a preference for recreational and environmental uses. Respondents indicated a desire to access the riverfront, whether through scenic views or bike trails. When asked about combining uses in the South Port, respondents indicated a desire for commercial uses along with outdoor recreation features. Industrial uses, although a strong idea generated from the public brainstorming session, saw neither strong nor weak preference from survey respondents. Several of the features and land use preferences gathered in the two public input processes may not be feasible in the South Port. A land uses analysis proceeded to help determine the feasibility of ideas generated from the citizens of Dubuque.

Discovering Land Use Feasibility

Any design for the South Port will not be successful if based on public input alone. Constraints such as space limitations, an unmovable railroad, limited options for additional access, and brownfields make many ideas generated from the public infeasible. For example, a canal was a popular idea at the brainstorming session, but brownfield areas in the South Port increase the chances of contamination into the Mississippi River if built. Evaluating land uses based on feasibility criteria in addition to public input will guide the creation of design alternatives for the highest and best use of the South Port.

Five land use types are examined in the subsequent sections: industrial, environmental restoration recreation/tourism, residential, and commercial. The South Port will likely not develop as only one land use, however, individually examining each helps to identify the appropriate mix of land and types of amenities to provide.

Three criteria are used for evaluation along with public preference:

- **Alignment with Dubuque Goals and Visions** – The Dubuque Comprehensive Plan identifies its vision for future development in line with the Sustainability Pillars of environmental integrity, social/cultural vibrancy, and economic prosperity. The criterion evaluates whether each land use satisfies each Pillar as stated in the Plan. The Plan is a guide for future development that needs to be considered in designs for the South Port.

- **Market Potential** – Different land uses require different characteristics for success. Land along the riverfront, and in particular the South Port, is better suited for the long-term success of some uses more than others. For example, commercial uses need continual traffic and high visibility among other things. The criterion evaluates whether the market in Dubuque would support the land use in the South Port. Evaluation is based on developer interviews, local/regional deficiencies of amenities with each land use, and how similar uses fair in Dubuque, specifically uses located near the riverfront, the North Port, and downtown Dubuque.
- **Physical Suitability** – As described in the “Current Conditions” section of this report, the South Port faces several physical barriers to development. The criterion evaluates the physical feasibility of developing the South Port for each land use. Evaluations are based on the need and magnitude of additional accessibility, the compatibility with railroad operations, the limitations of the location along the river, and the need for additional parking associated with each land use.

All land uses are ranked high, medium, and low for each criterion. A ranking of high indicates an opportunity and a ranking of low indicates an infeasible use in the South Port. A ranking of medium indicates a possible land use with some limitations. Brownfield concerns associated with each land use are noted as well.

Land Use Summary Matrix

The analysis of the five land uses are summarized in the table below. Although the designated rankings have elements of subjectivity, the table provides a broad overview of the feasibility in the South Port. The analysis shows industrial uses as the least desirable for the South Port mainly because of past City actions to limit industrial expansion and the incompatibility with surrounding uses. It is difficult to connect industrial uses with uses in the downtown and North Port because of noise, congestion, and safety concerns associated with certain industrial operations. The greatest opportunities exist in recreational uses that complement the North Port development and environmental uses to provide open space along the Mississippi River.

Land Use Analysis Summary

Criterion	Industrial	Environmental	Recreation/Tourism	Residential	Commercial
Public Preference Rank	5 th	2 nd	1 st	4 th	3 rd
City Visions and Sustainability Pillars	Low	High	Medium	Medium	High
Market Demand Potential	Low	Medium	High	Low	Medium
Physical Suitability	High	High	Medium	Medium	Medium

Developer Interviews

Prior to ranking each land use, a number of local developers were interviewed to gather insight on the desirability of the South Port site. A set of base questions were utilized when interviewing developers, but each person interviewed was offered flexibility in what they felt was important to discuss. Two real estate brokers and three developers agreed to offer their insight into the potential for redevelopment in the South Port. Seven questions were asked. The following section shows the results of how each question was answered.

1. What is your opinion of developing residential uses in the South Port?

Answers varied among those interviewed from thinking the South Port was not suitable for residential development to those that felt it was, but only if residential remained a small component.

Why residential is not suitable:

- Fish flies are an issue in the Port area and typically create havoc along the Port up to five times per year leaving an odor people would not want to live near.
- Noise from the railroad.
- Previous independent developers have tried developing condominiums along the Port and were unsuccessful.
- Condominium development does not have high demand in Dubuque.

How to make residential suitable:

- Include condominiums with other types of commercial property that would entice people to live in the Port area.
- Enable homeowners to own land rather than purchase a home on leased land.
- Improve accessibility.

2. What is your opinion of developing commercial uses in the South Port?

Most agreed the South Port is a great location for commercial use. However, there was some disagreement on the type of commercial use. A few stated that no retail businesses should be allowed while others felt retail would be a good choice. Those stating that no retail should be allowed instead felt office space, restaurants, water-related, and recreation focused businesses should take precedence.

3. What is your opinion of developing mixed-use (commercial & residential) in the South Port?

Of those interviewed, only three answered the question directly and all three felt mixed-use development was doable. However if residential use was incorporated, all three felt it would only work if the land was not leased.

4. What is your opinion of turning the entire South Port into a recreation area? What type of recreation do you feel would be good for the area?

None of those interviewed felt recreation use alone would be the best land use unless there were recreational focused

businesses included in addition to a simple open green space/park. Specific examples are provided below.

- Types of recreation to enhance the surrounding area included extending the walking path, a baseball field, miniature golf, go-carts, and multiple ways for individuals to take part in physical activity.

5. What is your opinion of keeping the South Port open for industrial uses or mixing industrial use with residential and/or commercial use?

No one answered the question because of the assumption that the South Port was being redeveloped and industrial use would not be considered an option.

6. In your opinion, is it financially feasible to develop residential and/or commercial uses in the South Port?

All agreed, depending on the circumstances and proper analysis, developing the South Port is financially feasible. Once again, the majority did not feel residential development would be feasible if it was on leased land.

7. In your opinion, does it matter if the land is leased or owned? If yes, would you develop on leased land? If yes, commercial and/or residential?

Those that answered this questioned all agreed that developing leased land is more difficult, adds extra hurdles, and is not suitable for residential development. Having an extended lease term of at least 99 years is needed for the opportunity to amortize out in order to make a profit.

Overall Comments

Most agreed that the City should sell the land so developers can redevelop the South Port based on market demands. All agreed that whatever is developed in the South Port should excite people to go there. With the insight gathered from local developers, further analysis continued based on the previously described criteria for industrial, environmental, recreational, residential, and commercial uses.

Industrial Use

Industrial use has historically been located in the South Port area. The atmosphere continues to change in the Port of Dubuque and questions on whether industrial uses are still the highest and best use linger. Public preferences and the land use analysis suggest not.

City Goals - Low

Industrial use does not align with City goals due to past actions taken by the City to rezone the land. These actions are evidence that the City wishes to see the South Port incorporated into a more cohesive downtown and riverfront. Zoning changed from Heavy Industrial to Planned Unit Development (PUD) with the 2002 Port Master Plan. With the rezoning came challenges against the City for industrial uses in the South Port, however, the Court agreed in preventing industrial development.

State of Iowa Code 414.3 states the City is able to have zoning regulations “made with reasonable consideration, among other things, as to the character of the area of the district and the peculiar suitability of such area for particular uses, and with a view to conserving the value of buildings and encouraging the

most appropriate use of land throughout such city.” In the court case of *MOLO OIL COMPANY, Mulgrew Oil Co., and DRBE Properties, L.L.C., Appellants, Dodds River Terminal, Inc., v. THE CITY OF DUBUQUE, Iowa, and the City Council of the City of Dubuque, Iowa, Appellees* Iowa Supreme Court Justice Wiggins stated:

"These conclusions are supported by substantial evidence showing **industrial uses by their nature tend to generate levels of smoke, dust, noise, or odors rendering them incompatible with most other uses, and there is no way to adequately screen the area north of the Ice Harbor** from the area south of the Ice Harbor. Substantial evidence also supports the finding by the district court that the area south of the Ice Harbor had access problems due to the railroad tracks, and the businesses located in the area were not using the riverfront in connection with their business operations. Finally, substantial evidence supports that the economic impact to the area south of the Ice Harbor would add a substantial number of new jobs to the area and increase property values in the area by at least \$40 million, resulting in a million dollars per year in added tax revenue to the city."

The court concluded that the amendment to the zoning ordinance was a proper exercise of the City’s police power.

A second court case, *Newt Marine v the City of Dubuque and the Dubuque Board of Adjustment* was filed in 2003 by Gary Newt. Newt Marine and Company wanted to build a new warehouse. They also wished to rebuild four storage tanks that had been removed in 2001, the year before the rezoning took effect, and to be given an exception from the screen

requirement in the PUD. The court upheld the denial of the variance because a prior nonconforming use could continue to operate but “may not expand in gross floor area nor change in use from one nonconforming use to another nonconforming use.”

Market Potential - Low

The market potential for new industry to develop in the South Port is low for several reasons. First, businesses requiring just-in-time deliveries are unable to locate in the South Port due to accessibility issues created by freight trains blocking Jones Street.

In consideration for relocation of the businesses currently located in the South Port, there are three other heavy industrial parks in Dubuque and a fourth location zoned industrial with river access. These include the Dubuque Industrial Center West, the Dubuque Industrial Center South, the Dubuque High Technology Industrial Park, and the Peninsula at 12th Street and Dove Harbor.

Dubuque Industrial Center West includes approximately 550 acres of industrial developable land. It is located on Chavenelle Drive and Pennsylvania Avenue. Currently there are approximately 317 acres available for development.

A second industrial park in Dubuque is the Dubuque Industrial Center South. Dubuque Industrial Center South is one of the six urban renewal districts in Dubuque. This industrial park is currently in the beginning stages of development, and will have approximately 100 acres of developable land. It is located south of town along Seippel Road.

For those industries that are dependent upon the Mississippi River, there is industrial space at the 12th Street Peninsula. Dove Harbor accommodates river dependent industrial activity with heavy truck and rail traffic. It is north of the Port of Dubuque along the river. Dubuque Terminals, the industrial business in the South Port that requires access to the riverfront, has entered a lease agreement with the City to relocate to Dove Harbor. They have leased 6.13 acres of land. The lease began in February 2013 and terminates June 1, 2038. At the end of each of the first three years, Dubuque Terminals, Inc. has the option to terminate the lease. The City of Dubuque has provided a ten-year TIF for qualified improvements that are completed in the first five years of the lease. All other improvements are at the expense of Dubuque Terminals and become property of the City at the end of the lease. The terms of the lease are contingent on Dubuque Terminals vacating the South Port.

Dubuque Industrial Center South



Dubuque Industrial Center West



12th Street Peninsula



Source: Google Maps, 2013

Physical Suitability - High

An industrial use works well with the flat land in the South Port. The existing unimproved roads work for the current industry, as they are able to conduct business albeit the accessibility issues caused by the railroad. The waterfront property lends itself to the harbor related businesses currently located in the South Port, and the railroad has been an important part of the historical development of the South Port. However, freight trains blocking Jones Street makes the location difficult for industries that rely on just-in-time delivery.

Summary

The public showed assorted opinions for industrial use. Although the site provides access to river, rail, and roads for industrial businesses, the City zoned the area away from industrial, thus changing the vision for the site. Industrial uses are incompatible with the surrounding zoning, downtown and the North Port.

Criteria	Industrial Use Rank
Public Preference Rank	5 th
City Visions	Low
Market Demand Potential	Low
Physical Suitability	High

Environmental Uses

Environmental uses involve restoring the area to its natural state before development occurred. Nature preserves, parks, and open space can all support environmental goals that

minimize pollution, encourage natural habitats, and promote sustainability. People also appreciate the pleasing atmosphere created by open space. Evidence shows that open space and parks have health benefits stemming from less pollution and safe opportunities to enjoy the outdoors (Harnik, 2012).

City Goals – High

The South Port provides land to satisfy a number of environmental goals in the Comprehensive Plan. Each of the three Pillars of Sustainability for Dubuque contains a priority related to environmental restoration. A few relevant goals are listed below (City of Dubuque, 2007).

-Environmental/Ecological Integrity-

- Goals 1 and 2 in the City Environmental Quality goals state to identify, preserve, and promote linkages of open and green space and to consider potential open space in any action relative to land use.

-Economic Prosperity-

- Goal 7 and 10 in the City Economic Development goals states to enhance recreational access to the river as an economic development strategy and promote the Public Space and Open Areas portion of the Downtown Master Plan.

-Social and Cultural Vibrancy-

- Goal 8 in the City Recreation goals looks to optimize open space amenities on the riverfront, including a clean riverfront.

Market Potential - Medium

The local supply of park space helps determine whether the South Port is an appropriate location for additional open space. As of 2012, the City of Dubuque contained 51 city owned parks. Most of the parks are smaller, with a median park size of 2.5 acres (Comprehensive Annual Financial Report, 2012).

Dubuque Park Inventory

Dubuque Park Data	2000	2010
City Population	57,686	57,637
Land area (sq. miles)	26.48	29.97
Density	2,178	1,923
Land Area (acres)	16,947	19,181
Density (per acre)	3.40	3.01
Park Acres	833	901
Acres per 1,000 residents	14.44	15.63
Acres as a % of City Area	4.92%	4.70%
Park units	38	48
Park units per 10,000	6.59	8.33
Average Park size (acres)	21.92	18.77

Dubuque versus Other Cities

Comparing Dubuque with cities of similar population densities provides a way to determine the adequacy of parks. Dubuque has a low population density at 1,899 people per square mile and is therefore compared with other low density cities (Census 2011). Dubuque's park acres per 1,000 residents of 15.62 in 2011 are slightly below the median for similar density cities of

19.4, although 10 acres is a commonly accepted standard. Park acres as a percent of total city land area is 4.63%, also below the comparable median of 5.50%. Dubuque, however, ranks higher for park units per 10,000 residents with 8.32 compared to the median of 3.5 (Harnik 2012).

Local Analysis

In total, Dubuque provides sufficient park space. However, park space is not evenly distributed throughout Dubuque. The resident population within the one mile radius of South Port is 15,861 (Census 2010). In the same one mile radius there were 89 acres of city park land in 2010; giving only 5.61 acres per 1,000 residents and providing further reason to add park land near the urban core. Acres per 1,000 residents would be even less if taking into account the daytime population growth in the urban core resulting from workers to the downtown.

The South Port is the one place near the urban core capable of providing large amounts of open space. Most Dubuque park units are small mini parks with limited uses and acreage. About half of all park units are less than 2.5 acres and only 12 are above 20 acres. Larger open spaces provide opportunities for a greater range of recreational activities to accommodate many age groups.

Parks Near Downtown



*Park space consists of city, county, and state parks

Physical Suitability - High

The flat area and location of the South Port offers a suitable area for environmental uses. Lower intensities associated with parks and open space limit additional accessibility needs and parking. Pedestrian safety issues associated with the railroad do present concern; however, mitigation measures are possible.

Accessibility, Parking, and Rail

If just using the South Port for park space, vehicular access via Jones Street and Ice Harbor Road is acceptable while also allowing emergency vehicles access if needed. Additional ways for pedestrians to circulate to, and within, the site is needed for maximum usage.

Environmental restoration aims to discourage cars and parking facilities. The lower intensity of the use will require minimal additional parking. If accessibility measures are taken, people will be able to reach the South Port from downtown and North Port via trails and pedestrian walkways. There would only need to be limited parking for service and maintenance vehicles, public shelters, and areas for the handicapped.

A pedestrian intensive use such as parks increases the level of risk associated with the railroad. Buffers near the railroad, such as trees or shrubbery, can make the area more aesthetically pleasing, but do not necessarily increase safety for pedestrians. Fences and clear crossing signals at access points are essential to keep the South Port safe for all ages, particularly children. The three case studies detailed in Appendix B, indicate the success of open space amongst the externalities of active railroads.

Summary

The criteria evaluation indicates environmental land uses in the South Port are desirable. Public preference, alignment with City visions, and lower burden for additional access and parking are key determinants. The South Port could also fill a gap in park space near downtown, although there are many park areas already in Dubuque.

Criteria	Environmental Use Rank
Public Preference	2 nd
City Visions	High
Market Demand Potential	Medium
Physical Suitability	High

Recreation and Tourism

There are several factors that indicate a demand for recreation and tourism in the South Port. The recent success of the North Port redevelopment shows the potential of land on the riverfront. The location of the South Port is near successful visitor attractions and a major thoroughfare. The location is visible coming into Dubuque, with various forms of lodging in close proximity. Citizen input shows a preference for recreational uses, in addition to goals laid out by the City.

City Goals - Medium

Successful recreational destinations are usually characterized by an iconic landmark or building. The river and current development at the Port of Dubuque provides this. Two recent recognitions identify Dubuque as a tourism and recreational

destination. The Travel Federation of Iowa recognized Dubuque as the Iowa Tourism Community of the Year in October of 2012 citing Dubuque's ability to double the amount of money spent by visitors to the city each year (Wiedemann, 2012). The Iowa Rivers Revival awarded Dubuque the River City of the Year award in January of 2013 citing the revitalization of the downtown riverfront as a reason. Upon receiving the award Mayor Buol expressed the river's importance for commerce and recreational opportunities (Habegger, 2013).

The Dubuque Comprehensive Plan encourages outdoor recreation and tourism along the riverfront in line with Sustainability Principles. Two of the three Pillars of Sustainability contain at least one recreational priority along the river. Listed below are some examples:

-Economic Prosperity-

- Goal 7 in the City Economic Development goals references promoting additional tourist attractions, enhancing recreational access to the river, and adding amenities for citizens and tourists along the river.

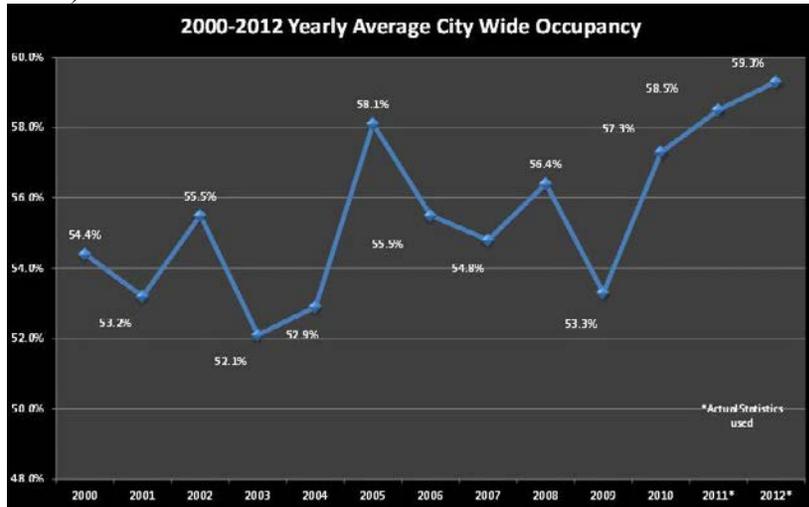
-Social and Cultural Vibrancy-

- Goal 8 in the City Recreational Goals includes encouraging more attractions at the Port of Dubuque and promoting a clean riverfront.

Market Potential – High

The Port of Dubuque is a trademark tourist destination in Dubuque with the transformation of the North Port over the last ten years. In 2012 Dubuque hosted 1.9 million visitors (Council Work Session, 2013). Festivals and events occur year-round, along with the constant operations of the Diamond Jo Casino and the National Mississippi River Museum.

Local lodging tax receipts are one way to determine tourism demand. There are approximately 24 hotels in Dubuque city limits, ranging from upscale boutique to bed and breakfasts. Among these 24 lodging options there are approximately 1,796 rooms. Dubuque hotel tax receipts are estimated to rise in 2013 and 2014 (Dubuque Convention and Visitors Bureau). Average occupancy continues to rise with average occupancies in 2011 and 2012 being the highest in Dubuque over the last 12 years at 58.5% and 59.3% respectively (Dubuque Visitors Bureau, 2013)



Source: Dubuque Convention and Visitors Bureau

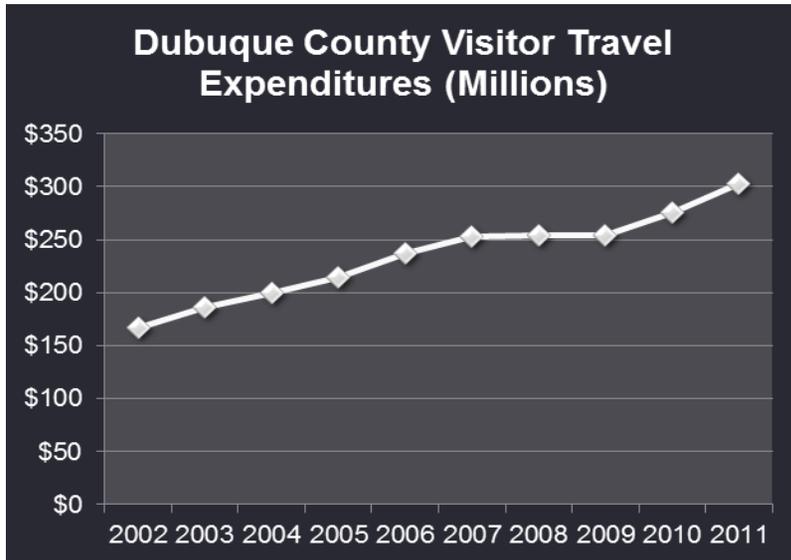
Visitor Travel Expenditures

Every year the U.S. Travel Association conducts research on the economic impact of travelers to Iowa counties. Travelers are described as “both state residents and out-of-state visitors traveling away from home overnight in paid accommodations, or on any overnight and day trips to places 50 miles or more away from home.” Dubuque County ranks high for visitor travel expenditures compared to other Iowa counties on a per resident basis. Although there are other attractions in the County, such as the Field of Dreams Complex in Dyersville, Dubuque is by far the largest municipality with the most “pull” attractions.

Dubuque County Travel Visitors 2011

	Per County Resident (2010 Pop.)	Rank Among Iowa Counties
Expenditures*	3,229	8th
Local Tax Receipts	43	11th
*Expenditures include lodging, food service, entertainment and recreation, retail trade, and transportation		
Source: U.S. Travel Association, 2012		

Dubuque County continues to see increases in expenditures and local tax receipts from visitor travelers with only a slight drop during the 2008 recession. Increasing gasoline prices contribute to the increasing expenditures.



Source: U.S. Travel Association, 2012

Visitor Interests

Survey data from the Iowa Welcome Center in the Port of Dubuque provides insight on where visitors are spending money. Note that visitors who completed surveys at the Welcome Center may not be at their final destination. However, intermediate visitors still spend money locally. The Dubuque location ranked highest among all Iowa Welcome Centers in trips for vacation or leisure at 69.8% of survey respondents (IEDA 2012). Therefore, it is likely that people stopping in Dubuque have time to walk around if they find the Port area attractive.

Opportunity in the South Port

Visitors Bureau President Keith Rahe states that most visitors do not view Dubuque as a week-long destination but rather a 1-3 day trip. A recent focus group, conducted by the Dubuque Convention and Visitors Bureau, found visitors appreciate the clean, friendly, and affordable attributes of Dubuque, as well as the good way finding system (City of Dubuque, 2013). Visitors to Dubuque likely spend their time in the North Port and downtown area, the main tourist areas in Dubuque. Using the South Port for outdoor recreation can satisfy these demands and complement existing amenities.

Physical Suitability - Low

Flat space makes most recreational uses feasible. However, the higher intensity of recreation events and tourism attractions requires a road and parking network to support additional capacity. Providing safe and efficient access is required for the land use in the South Port.

Accessibility, Parking, and Rail

Recreational and tourist attractions create an influx of people at specific times, typically during events, festivals, or weekends. Peak attractions require access to accommodate the maximum number of vehicles and pedestrians. Therefore, creating a tourist destination in the South Port will require several additional direct access points. Especially important is emergency and vehicular access.

As with accessibility, sufficient parking will be required to support attractions. The specific amount of parking will vary depending on the type of venues and intensity within the South

Port. Regardless, parking is needed to comply with Dubuque design requirements and not overburden surrounding parking facilities.

Aside from accessibility issues, externalities related to the railroad have mixed effects if the South Port becomes a tourist destination. Attractions like those in North Port successfully operate near the same rail line, although not a switch station. Buildings can create a buffer between rail operations and outdoor attractions near the riverfront. In fact, a working railroad could complement interests through a niche museum or historical attraction. Rail operations can, however, negatively affect outdoor recreational attractions. Outdoor venues are popular because of aesthetic surroundings and safety. Events such as outdoor concerts or farmers markets would have to work around the noise of rail cars switching and passing trains. Putting outdoor uses near the harbor and river, with structures near the rail line, could mitigate the effect.

Summary

The public prefers recreational uses in the South Port and the site provides an opportunity to complement the already successful tourist attractions in the North Port. Access for large groups of people present concerns and the use aligns with some sustainability goals.

Criteria	Recreation/Tourism Rank
Public Preference Rank	1 st
City Visions	Medium
Market Demand Potential	High
Physical Suitability	Medium

Residential

Incorporating residential development in the South Port will depend largely on future market demand. There are reasons for and against residential development. For example, housing near downtown is desirable, but housing near a railroad with limited access points is undesirable.

City Goals - Medium

Residential uses need to locate near everyday amenities and be affordable. The Dubuque Comprehensive Plan has several goals to improve affordable housing options in the City. Many housing goals however, are infeasible for the South Port unless incentives are provided for development. Two of the three Pillars of Sustainability contain goals relating to residential development near the South Port. Listed below are some examples:

- Environmental/Ecological Integrity –

- Goal 1 of the Land Use and Urban Design goal states to support implementation of the current Port of Dubuque Master Plan, including residential use.

- Economic Prosperity –

- Goal 10 of the Economic Development Goals states to promote the Residential Living element of the Downtown Master Plan, which focuses on offering housing options near downtown.

Market Potential - Low

A city's vacancy rate is one indicator as to how the housing market is currently performing. The City of Dubuque has a low housing vacancy rate of less than 5% with approximately 65.89% owner-occupied and 28.51% renter occupied housing (ACS 2007-2011). According to the Iowa Data Center the vacancy rate in Iowa in 2009 was 6% compared to 8.4% in the U.S. This means the City of Dubuque is faring well in regards to the supply and demand of housing. However, vacancy rates alone only indicate the aggregate proportion of housing units currently vacant including those available for rent and/or sale.

The City of Dubuque is relatively consistent with the State of Iowa in regards to housing age but in comparison to the U.S. the City of Dubuque lags behind. The City of Dubuque has 76.19% of their housing stock older than 40 years compared to only 40% in the U.S. This indicates most of the housing stock available in the City of Dubuque includes older homes. What does this mean for the City of Dubuque homeowners? According to the National Association of Home Builders older housing stock indicate and/or signal "future increased demand for both remodeling and new home construction over the long-term" (NAHB, 2013).

The City of Dubuque has been fairly consistent in issuing new privately owned residential building permits. According to the U.S. Census the City of Dubuque issued 5,283 permits over the last 10 years. However, as shown in the table to the right, the majority of permits issued have been for the development of single family homes, followed by multi-family units of 5 or more family units. Very few two family units and three to four family units have had permits issued for their development. This indicates new construction is primarily focused on single

family homes rather than condominium, townhome and/or multi-family unit development.

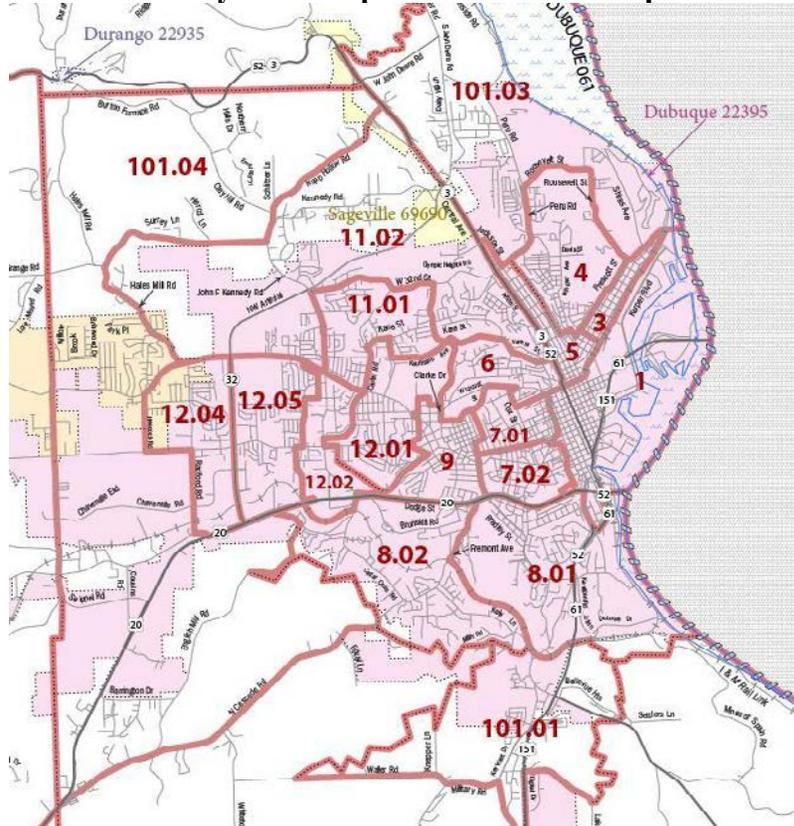
City of Dubuque Issued Housing Permits

Year	Single-Family	Two Family	3 & 4 Family	5+ Family	Total
2001	326	36	21	58	441
2002	384	46	6	61	497
2003	399	48	24	70	541
2004	414	48	6	401	869
2005	424	46	41	46	557
2006	363	24	10	14	411
2007	319	22	13	12	366
2008	201	12	0	0	213
2009	315	18	0	102	435
2010	324	28	7	189	548
2011	276	20	3	106	405
Total	3745	348	131	1059	5283
%	70.89%	6.59%	2.48%	20.05%	100.00%

Source: 2011 US Census

New construction is also not occurring evenly in the City of Dubuque (ACS 2007-2011). No newly constructed residences have been developed in census tract 1 since 2000, only 0.33% in census tract 3, 0.71% in census tract 7.01, and 1.41% in census tract 7.02. In addition, census tract 1 had the lowest median house value in the City of Dubuque (\$64,800) compared to census tract 101.4 which had the highest median house value (\$206,600).

City of Dubuque Census Tract Map



Source: City of Dubuque

When vacancy rates are compared by census tract it is clear that vacancy rates are also not evenly distributed throughout the City of Dubuque. Although the City of Dubuque has approximately 4.96% overall vacancy rate, the majority of those vacant units are located in census tracts surrounding the South Port of Dubuque that primarily consist of older housing units.

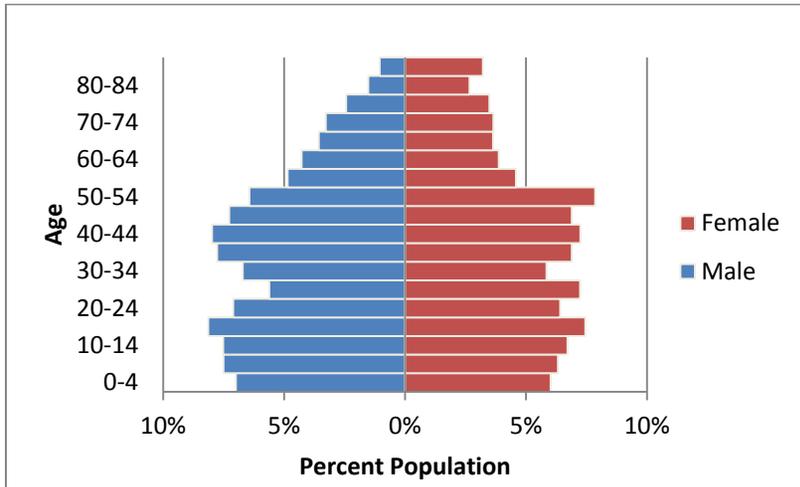
Population Projection

Conducting a population projection may provide evidence of what type of housing needs there may be in the future. According to Hoch (2000), “planning agencies use population change as an index of future needs [such as] the number of future households needed” (p. 83). Therefore, using the cohort method to project the population can provide evidence as to future housing needs in the City of Dubuque. As Hoch (2000) stated “age is the single most important dimension of population for planners because of its close relation to service needs [therefore it] helps reveal which age groups will be dominant at particular times [thus] predicts increase in the needs for services [such] as housing” (p. 65).

Age	2000 Population		2040 Projected Pop		% Change 2000-2040	
	Male	Female	Male	Female	Male	Female
0-4	3,030	2,882	3684	3590	21.58%	24.57%
5-9	3,254	3,026	3557	3560	9.31%	17.65%
10-14	3,258	3,217	3557	3587	9.18%	11.50%
15-19	3,526	3,568	3988	4795	13.10%	34.39%
20-24	3,080	3,072	5560	6518	80.52%	112.17%
25-29	2,432	2,465	3369	3511	38.53%	42.43%
30-34	2,908	2,801	4060	3436	39.61%	22.67%
35-39	3,368	3,299	3352	3546	-0.48%	7.49%
40-44	3,459	3,472	4579	3962	32.38%	14.11%
45-49	3,151	3,301	4610	3163	46.30%	-4.18%
50-54	2,789	2,762	1558	1970	-44.14%	-28.67%
55-59	2,104	2,194	2784	2559	32.32%	16.64%
60-64	1,854	1,856	2191	2275	18.18%	22.58%
65-69	1,544	1,742	1877	2333	21.57%	33.93%
70-74	1,421	1,747	2221	2065	56.30%	18.20%
75-79	1,055	1,669	2091	2369	98.20%	41.94%
80-84	659	1,274	1559	1436	136.57%	12.72%
85-	452	1,540	1178	2072	160.62%	34.55%

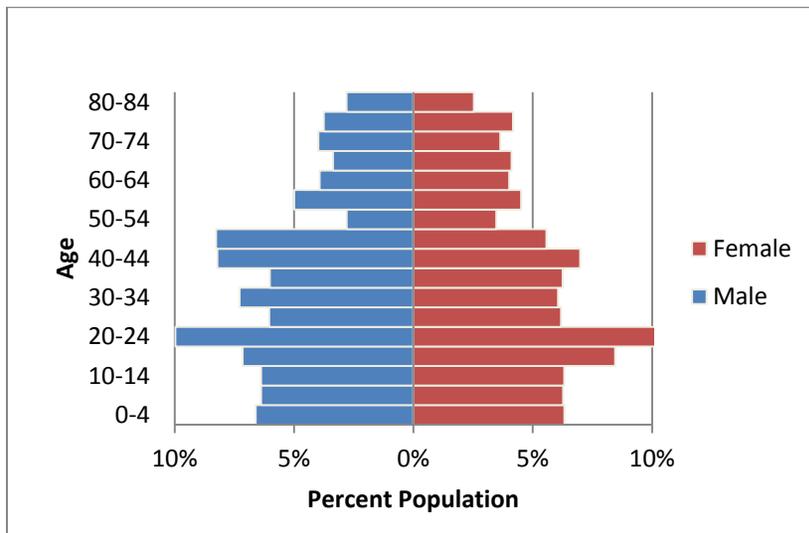
Source: (2000) Data from U.S. Census, (2040) Data calculated by author using Cohort Method

Dubuque County Population Pyramid Year 2000



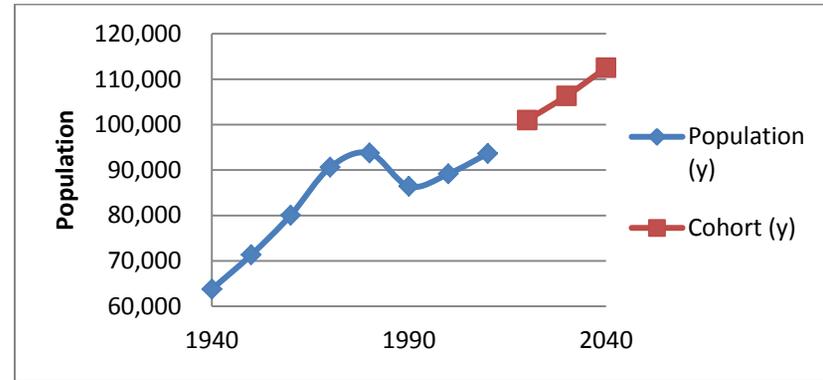
Source: U.S. Census Population Division (2009)

Dubuque County Population Pyramid Year 2040



Source: Calculated by author, U.S. Census (2009)

Dubuque County Population Projection (1940-2040)



Source: Calculations conducted by author, U.S. Census Population (2009)

The information found by conducting a population projection estimates that the County of Dubuque will have a 2040 population approximately 112,521 and therefore, the demand for housing will rise in the future. The population pyramid points out that males and females between the ages of 20-24 will rise dramatically (80.52% males, 112.17% females) as will males over the age of 79. The largest decrease in age group estimated in 2040 for both males and females is between 50 to 54 years of age.

If only considering the projected population and increased need for new residential development, there is market potential for residential development in the South Port. However, based on public input, developer statements, and high vacancy rates in adjacent census tracts to the South Port, residential development does not have the market potential needed in the South Port location.

Physical Potential

As of January 2013 the City of Dubuque offered 12 different land use zone types. Currently, there are no residential developments or uses directly adjacent to the South Port, possibly indicating the area is not suitable for residential. The location near the railroad is of particular concerns for anyone that would live in the South Port.

Accessibility, Parking, and Rail

In order for residential use to be considered viable and safe in the South Port accessibility would need to be improved and/or expanded to accommodate increased density.

Multi-family units require at least 1.5 parking spaces per unit or 2 parking spaces for an attached or detached single family unit. Therefore, in order to include residential use, the South Port would need to be able to accommodate the additional parking spaces for residences.

The railroad poses a problem for residential development in regards to noise pollution caused by the railroad. Unless sound barriers are put in place the location may be considered too noisy for residential use. The Mississippi River presents some negative effects as well being a large water source that attracts the nuisance of fish flies. The developer interview section detailed above, noted that fish flies would detract people from wanting to live in the South Port.

Summary

Residential use in the South Port does not appear a feasible or desirable use at this time. Public input lacked enthusiasm for residential development. Developers are mixed on the potential for success. Living near a railroad makes the site questionable.

Criteria	Residential Use Rank
Public Preference Rank	4th
City Visions	Medium
Market Demand Potential	Low
Physical Suitability	Medium

Commercial

City Goals - High

The Dubuque Comprehensive Plan addresses commercial development in all three Sustainability Pillars. The 2002 Port of Dubuque Master Plan also calls for the South Port to be a mixed-use commercial district. The North Port of Dubuque has been successfully redeveloped into a tourist and commercial business district. Examples of goals in the Comprehensive Plan relating to commercial development in the South Port include:

- Environmental/Ecological Integrity -

- Goal 1 of the Land Use and Urban Design Goals states to support implementation of the Port of Dubuque Master Plan, which includes commercial.

- Economic Prosperity –

- Goal 12 of the Economic Development Goals states to promote redevelopment of existing vacant, underutilized, and brownfield properties.

- Social and Cultural Vibrancy –

- Goal 8 of the Recreation Goals states to encourage more attractions at the Port of Dubuque.

Market Potential – Medium

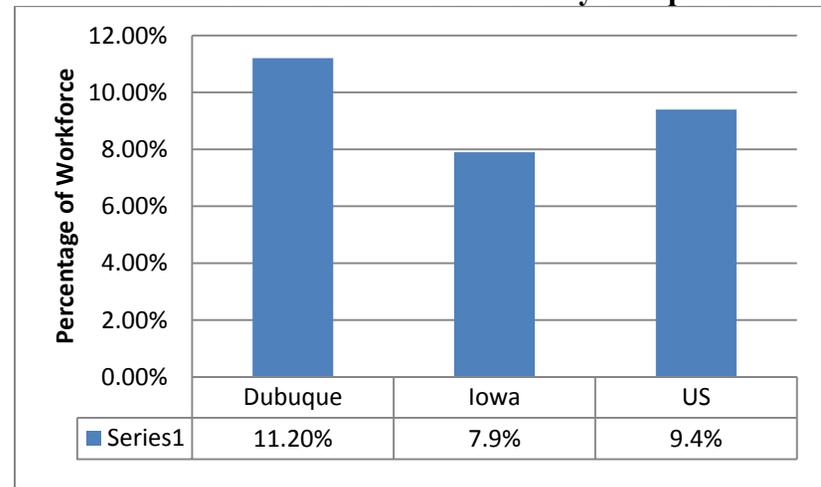
Commercial space requires high visibility and locations near the target market. The South Port is highly visible coming into Dubuque and its location near recreation trails and Ice Harbor would support small recreation and water related businesses. Restaurants are also a good fit because of the views of the river and the location near downtown.

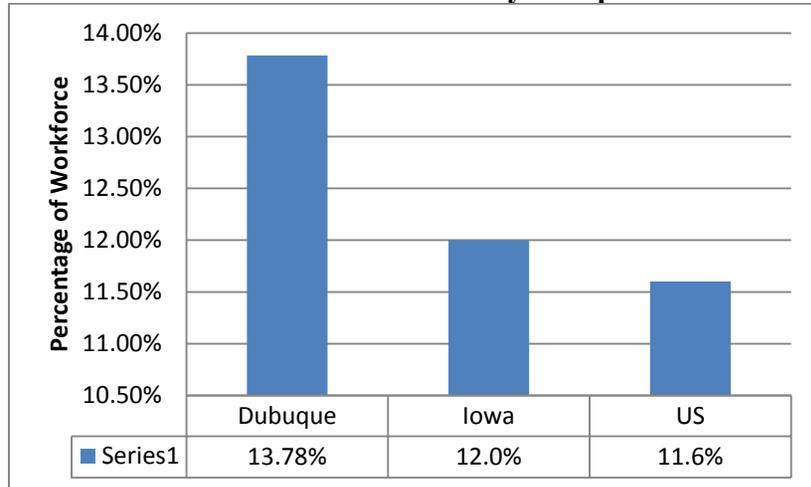
According to the 2007-2011 American Community Survey the City of Dubuque has a higher proportion of their workforce working in educational services (26.12%), retail trade (13.78%) and arts & entertainment (11.20%) than the State of Iowa and the U.S. How the City of Dubuque compares to the State of Iowa and the U.S. in major industry types are shown in the table to the right. The arts & entertainment industry in Dubuque employs more employees than the U.S. by 1.8 percentage points, and 3.3 percentage points more than the State of Iowa. The retail trade industry employs more employees than the U.S. by 2.18 percentage points, and 1.78 percentage points more than the State of Iowa.

Comparison Industry Percentage

Industry Type	Dubuque	Iowa	US
Agriculture	0.54%	3.9%	1.9%
Construction	3.78%	6.1%	6.1%
Manufacturing	14.17%	14.3%	10.4%
Wholesale Trade	2.81%	2.9%	2.8%
Retail Trade	13.78%	12.0%	11.6%
Transportation/Warehousing	3.25%	4.5%	5.0%
Information	2.86%	1.8%	2.1%
Finance & Insurance & RE	6.08%	7.3%	6.6%
Professional, Scientific, Mangement	7.73%	7.3%	10.7%
Educational Services	26.12%	24.1%	23.2%
Arts & Entertainment	11.20%	7.9%	9.4%
Other Services	4.81%	4.6%	5.0%
Public Administration	2.86%	3.3%	5.1%

Arts & Entertainment Industry Comparison



Retail Trade Industry Comparison

Considering the comparisons between the City of Dubuque, the State of Iowa, and the U.S. begs the question as to whether or not Dubuque has enough market demand for expansion in both industry types (arts & entertainment and retail trade). A few of the interviewed developers stated that there was no market demand for commercial other than office space. Developers did state recreation use is lacking but the type of recreation use recommended does not necessarily offer increased employment opportunities, especially if that use is simply an extension of the walking path or open green space.

Commercial Districts in Dubuque

The developer interviews in the previous section provide more insight into the demand for commercial development in the South Port. Currently, plaza shopping centers and downtown commercial property struggles to attract retailers. It is possible,

however, that providing commercial space could lead to more integrated mixed-use developments in the future South Port.

There are several commercial districts in Dubuque in close proximity to the South Port. These include the North Port of Dubuque, the downtown district, and the Historic Millwork District.

Unlike the North Port and downtown districts which are more established, the Historic Millwork District Master Plan was recently adopted on February 16, 2009. The main goals of the Plan are to inhabit old spaces, encourage the arts, and showcase green technologies. The Millwork District will become a mixed-use neighborhood including 732 residential units and 3,516,000 square feet of office space. The Millwork District offers office/residential, the North Port offers tourism/office, and the downtown offers retail/restaurants. Opportunities exist in the South Port to diversify commercial uses in the area, unique from these three districts.

Physical Suitability - Medium

Accessibility, Parking, and Rail

Commercial space must be easy to get to for continual usage. At minimum, additional pedestrian bridges connecting to the downtown and North Port are required to support small commercial businesses. Easier vehicular access is ideal to promote maximum usage throughout the day.

Additional daily usage will require more parking, either through surface or parking structures. Developable acres are limited in the South Port for higher intensity buildings and necessary parking. Without adequate parking, commercial use in the South Port may be infeasible.

The railroad presents little concern for commercial use. Structures can mitigate and provide a buffer for railroad noise to areas near the river. Commercial use does, however, increase pedestrian traffic which increases safety concerns near a railroad switching station. Adequate barriers and precautions will help prevent pedestrians from walking near the railroad.

Summary

The public would like a combination of commercial use and the City envisions commercial uses along the riverfront. The market potential and necessary accessibility additions could hamper the intensity of commercial use in the South Port.

Criteria	Commercial Use Rank
Public Preference Rank	3rd
City Visions	High
Market Demand Potential	Medium
Physical Suitability	Medium

Other Land Use Considerations

Brownfield Revitalization

Brownfield concerns are also relevant to specific land uses in the South Port. All of the South Port area could be classified as a brownfield. Lenders, investors, and developers fear that they may be required to cleanup a site's environmental problems they did not create. This may result in otherwise viable properties becoming blighted areas of the community, potentially creating safety and health risks for residents.

Environmental Site Assessment (ESA)

Further information is necessary to identify if a property is contaminated or not. Common sense tells us that every property with a prior industrial or commercial use does not necessarily require environmental cleanup. Further, it would be impractical to go to every brownfield site and collect samples for laboratory analysis.

A Phase I ESA is a preliminary look at a possibly contaminated property. A Phase I investigation primarily involves records research and onsite visual observations. Often, those performing the Phase I will speak with property owners about previous known uses of the land. No physical sampling or testing is done during a Phase I. Phase I ESAs are performed to identify recognized environmental conditions (RECs) in which a real or potentially real release of hazardous and/or petroleum materials has or may have occurred. Identification of an REC does not mean that contamination has occurred or, if it has, that it requires cleanup. Conducting Phase I ESAs provides essential information to:

- Provide liability protection to current and prospective property owners
- Help decide where actual testing should occur when necessary

If RECs are found on a property, a Phase II ESA may be performed to physically test the site. A Phase II ESA includes sampling of the soil and groundwater to identify the types, concentrations, and extent of potential contamination. If samples are found to have higher than acceptable

contamination levels (according to state and federal standards), cleanup of the site may be necessary.

Three sites in the South Port have had a Phase I ESA conducted. Of the three sites, consultants determined that a City owned site occupied by Dodds River Terminal, a trucking and hauling business, has no reasonable contamination. However, a reasonable possibility for contamination exists for the other two properties. Thus, the City was advised to conduct a Phase II ESA to determine if soil or ground water contamination exists. Based purely on historical and neighboring uses, much of the South Port going forward will require Phase I & II environmental testing.

Environmental Uses

Phase I and Phase II testing will need to be completed for all properties sited for open space. The Iowa Department of Natural Resources (IDNR) oversees and approves what remediation needs to be completed in an event of soil and ground water contamination. Less scrutiny is taken when looking at contaminated sites that are planned to be used for open space, as long as contamination is not spreading and does not come into contact with humans. However, IDNR will impose covenants on the property to ensure that the property is always used safely.

Tourism, Commercial, and Residential Uses

Phase I and Phase II ESAs will need to be completed for all properties sited for structural development. With these land use types more stringent cleanup efforts are taken, due to the possibility of human contact with contamination. The biggest

element limited in the South Port is the construction of basements. Depending on the height of the water table, basements are not allowed if there is the possibility of water seeping into them. The (IDNR) will not allow construction of a basement in contaminated areas. Many resolutions are available to deal with environmental conditions. In a contaminated area of the North Port, the issues were remediated to an approved level and the site was used for parking rather than construction. The IDNR will assist in dealing with any environmental concerns found.

Industrial

For current industrial use, permission to access the property for testing will be needed. Phase I and Phase II environmental assessments should be conducted to know if soil and ground water is being contaminated by current uses. However, soil and ground water testing on privately owned property can only be done on a voluntary basis.

FY 2014 EPA Assessment and Area Wide Planning Grant

If the South Port is to be redeveloped, the City of Dubuque should take steps now to plan and submit grant proposals for Assessment and Area Wide Planning grant funds. Due to the great success Dubuque had with past brownfields grants, the City has a great opportunity to leverage those successes to apply for funds focused in the South Port area. Assessment funds can be used to assess the environmental condition of South Port properties. Area Wide Planning funds can be used to build from the work we have completed and help create a focused and detailed plan for the South Port. The City has the opportunity to receive up to \$600,000 in funds from the EPA through assessment and planning grants.

DESIGN ALTERNATIVES FOR THE SOUTH PORT



Original Design Alternatives and Public Feedback

The following section outlines four design alternatives for the South Port. Each was developed according to the data gathered from the public brainstorming session, public survey, and land use analysis. The designs range from low to high density, with an industrial option included. Each alternative presents a framework for future development while suggesting feasible amenities identified by the public that are feasible according to issues identified in the land use analysis. More popular features are included in all designs, such as a pedestrian bridge over the floodgate, filling in the floodwall to view the river, and trails

connecting the North Port to the Mines of Spain State Park. Designs 2, 3, and 4 contingently move railroad administrative buildings to the south end of the site.

The two tables below summarize the land allocation and amenities of each design. The amenities listed are examples of the type of area envisioned for each respective design. Graphic renderings in the following sections show the layout with a description on how the design aligns with the previous analysis. A subsequent public feedback session on April 11, 2013 provided an opportunity for the public to input on the design alternatives before developing the final recommendation.

Land Allocation for Design Alternatives

Land allocation by use	Existing plan		Revitalized Industrial		Low Density		Medium Density		High Density	
	acres	%	acres	%	acres	%	acres	%	acres	%
Mixed-Use	23.1	70.0			4.0	12.1	5.4	16.4	6.1	15.2
Open Space	3.1	9.4	10.34	31.3	18.9	57.2	19.3	58.5	17.8	44.3
Right of Way	5.1	15.5	5.22	15.8	5.2	15.8	5.5	16.7	6.3	15.7
Existing and Preplanned	0.7	2.1	17.44	52.8	4.9	14.8	2.8	8.5	2.8	7.0
Underground Development/Garage									7.2	17.9
Other	1.0	3.0								
TOTAL	33.0	100	33.0	100	33.0	100	33.0	100	40.2	100

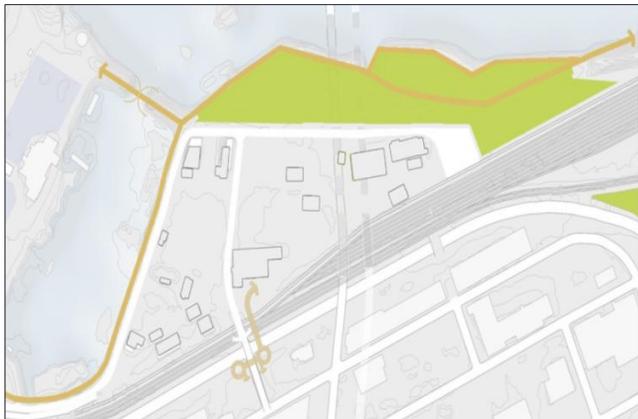
Proposed Amenities for Design Alternatives

Amenities	Industrial Area Revitalization	Low Density	Medium Density	High Density
Industrial Space	X			
Floodgate Pedestrian Bridge	X	X	X	X
Pedestrian Bridge over US 151 & RR	X	X	X	X
Riverside Wetland	X	X		
Fishing Docks	X	X		
Riverside Bike Path	X	X	X	X
Festival Grounds / Farmers Market		X		X
Pedestrian Only Paved Pathway		X		
Main Street Boutiques		X		
On-Street Parking		X		
Sculpture Park			X	
Rooftop Gardens			X	X
Integrated Open Space			X	X
Underground Parking			X	X
Cultural Main Street		X	X	
Residential			X	X
Vehicular Access Bridge over US 151 & RR				X
Museums				X
Amphitheater				X
Vision Piers			X	X
Shuttle Service to North Port and Downtown			X	X

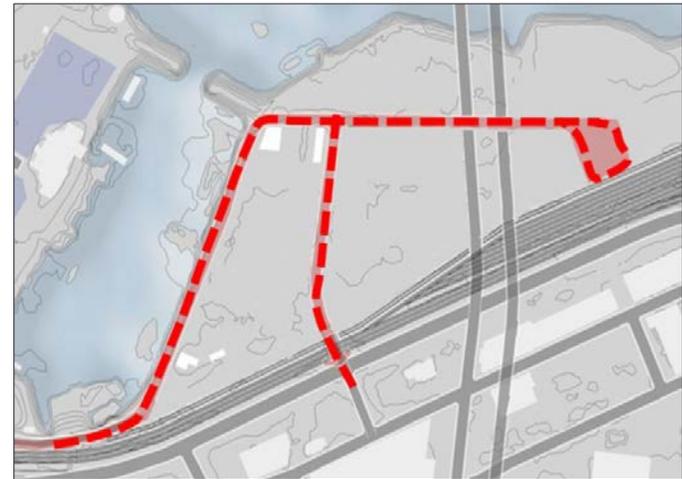
Design 1: Revitalized Industrial Port

The South Port has historically been used for industrial businesses. Public input from the brainstorming session saw several ideas calling to keep a working harbor, but with more appeal for people wanting to view the river and barge operations. Design 1 accomplishes this by revitalizing the current open space and transportation network. The design harnesses the economic value currently in the South Port. The road network is rehabilitated making it more inviting for community members to access open space provided along the riverfront. Bike and pedestrian paths are placed to promote use of the South Port area and interconnectivity with the downtown and North Port. Overall, the alternative recognizes the jobs and businesses already successful on the site, but provides an added level of environmental uses that complete the river trail system and buffer business from the riverfront. Open space will comprise 31% of the site and 51% will be left as industrial area. The remaining 18% is road right of way.

2 Proposed Green Space and Bike/Pedestrian Paths



Proposed Road Network and Parking



Although the industrial component remains the same, many elements differ from the current state of the South Port. Notable amenities and features include:

- Land graded from Terminal Street to the floodwall for river access
- Floodgate pedestrian bridge connecting North to South Port
- Riverside trail connecting to the North Port and extending south to the Mines of Spain State Park
- Keeping existing industrial buildings
- Rehabilitated road network to accommodate industrial needs, pedestrian traffic, and private vehicles
- Green space along the riverfront
- Wetlands south of the Julien Dubuque Bridge
- Pedestrian bridge over U.S. 151 and railroad that connects to downtown
- Fishing docks in either Ice Harbor or Mississippi River

Revitalized Industrial Port Alternative

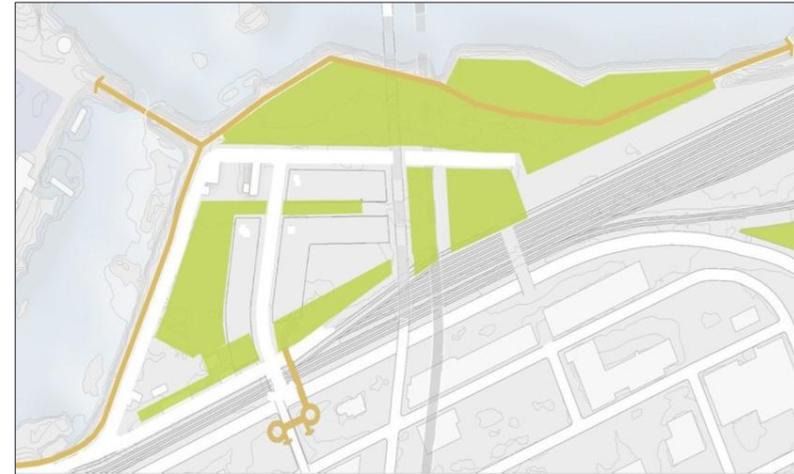


Design 2: Low Density

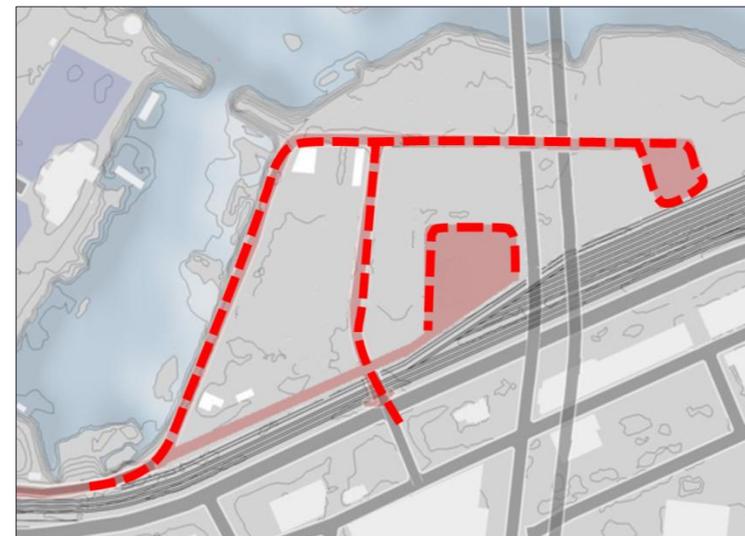
Public input showed a desire for more open space in the South Port. Open, environmental uses at the site also fill a gap in the park system and would limit the intensity of development to accommodate the lack of accessibility in and out of the site. However, input also showed a desire for a combination of commercial uses. Therefore, Design 2 focuses on substantial green space with pedestrian friendly pathways and small scale retail. It provides convenient store-front parking with a simple road network. Bike and pedestrian paths connect the one & two story multi-use buildings to green spaces, as well as between the North Port and downtown. Open space comprises 46% of the area and 12% is allocated for buildable area. Notable features and amenities include:

- Land graded from Terminal Street to the floodwall for river access
- Floodgate pedestrian bridge connecting North to South Port
- Riverside trail that connects with the North Port trail and extends to the south to the Mines of Spain State Park
- Revitalized road network with some new roadways containing street and surface parking
- All roadways with bike paths, sidewalks, and street parking along Jones Street
- Small main street boutiques (1 & 2 story)
- Pedestrian bridge over U.S. 151 and railroad that connects to downtown
- Pedestrian only paved pathway between buildings
- Wetlands south of the Julien Dubuque Bridge
- Fishing docks in Ice Harbor
- Railroad buildings moved to the south end of the site

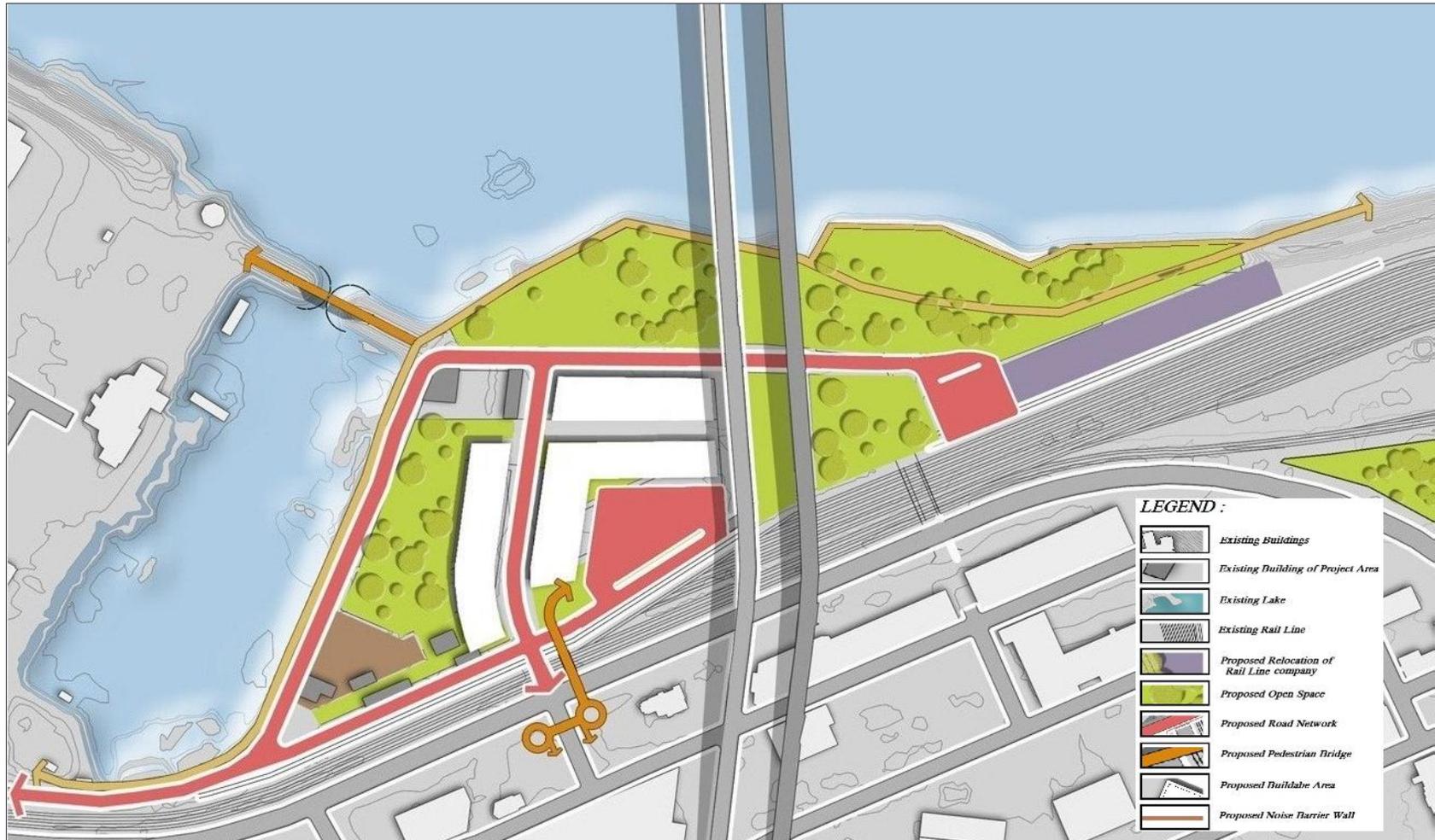
Proposed Green Space and Bike/Pedestrian Paths



Proposed Road Network and Parking



Low Density Alternative

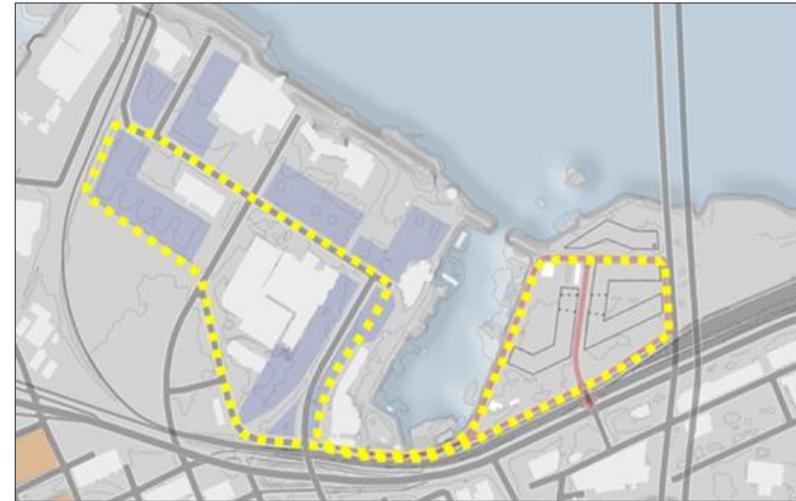


Design 3: Medium Density

High use areas such as those in downtown Dubuque and the North Port are options in the South Port as well. Citizens indicate a preference to combine commercial with environmental uses, particularly “Main Street” type retail and entertainment venues such as waterfront restaurants. City goals also aim to utilize the Mississippi River as the entryway to Dubuque with public access.

Therefore, Design 3 creates a striking entry way to the South Port area, concluding at a focal riverside building, potentially for a public use like an education center or museum. Design 3 focuses on creating a pedestrian oriented area for both commercial and environmental use. It makes a clear separation between medium intensity development on the north end of the site and river access with open space on the south and east portions of the site. Recognizing the need for more pedestrian traffic with commercial development, the design incorporates a shuttle service to help move visitors between the North Port, downtown, and South Port. The vehicular road network flows in a circular path around the proposed buildings in the north half of the site with bike and walkways alongside. A pedestrian mall runs between buildings from Ice Harbor to the Julien Dubuque Bridge. Pedestrian paths also flow along the waterfront and extend to the North Port via a bridge over the floodgate and to the Mines of Spain State Park.

Proposed Shuttle Route



Proposed Green Space and Bike/Pedestrian Paths



Proposed Road Network

Open space comprises 48% and buildable area comprises 16% of land in Design 3. Although more land is allocated to open space than Design 2, the density of the buildable area is greater due to 3 story buildings with commercial uses on bottom floors and residential or small office spaces on the top floors, possibly for emerging entrepreneurs or art galleries. Notable features and amenities include:

- Land graded from Terminal Street to the floodwall for river access
- Floodgate pedestrian bridge connecting North to South Port
- Riverside trail that connects with the North Port trail and extends to the south to the Mines of Spain State Park
- Under surface parking beneath the riverside building
- 3 story commercial and residential buildings with rooftops gardens

- Main street atmosphere with buildings close to each other and the main roadways
- Shuttle service to move people between North Port and South Port
- Two pedestrian bridges over U.S. 151 and railroad, one leading to commercial uses on the north end and one to the open space areas on the south end of the site
- Integration of park, trees, and green space along riverfront with higher intensity commercial uses
- Noise barriers between the railroad and development area
- Art & sculpture park/plaza between buildings
- Green space along the riverfront with playgrounds
- Vision piers from a bike trail outward into the river
- Railroad buildings moved to the south end of the site

Medium Density Alternative



Design 4: High Density

Recognizing again the opportunity to create a high use area along the riverfront, Design 4 takes Design 3 a step further adding another building on the south side of the Julien Dubuque Bridge. The building includes additional under surface parking. Design 3 mixes commercial with mainly environmental uses, however, Design 4 provides a combination of intense multi-use development, green walkable open space, and outdoor recreation uses. Citizens prefer recreational opportunities in the South Port the most, particularly highlighting walking trails and some type of outdoor entertainment venue. Adding an outdoor element to commercial uses in the South Port would complement attractions in the North Port to create a unified destination around Ice Harbor.

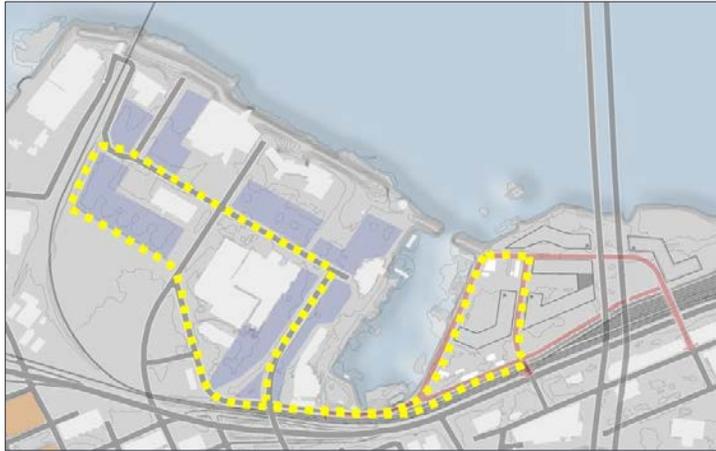
An additional vehicular access point south of the Julien Dubuque Bridge over the railroad and Highway 151, allows the greatest level of service to support the high density development. All three access points give pathways for bikes and walkers. Trails and sidewalks also provide the ability for pedestrians to connect to North Port amenities including a pedestrian bridge over the floodgate. Open space comprises 40% and buildable area comprises 19% of the South Port area.

Proposed Green Space and Bike/Pedestrian Paths



Proposed Road Network and Covered Parking



Proposed Shuttle Bus Route

Notable features and amenities include:

- Land graded from Terminal Street to the floodwall for river access
- Floodgate pedestrian bridge connecting North to South Port

- Riverside trail that connects with the North Port trail and extends to the south to the Mines of Spain State Park
- Large under surface parking along the floodwall and south of the Julien Dubuque Bridge to utilize more surface area for recreation uses
- 3 story commercial, office space, and residential buildings with rooftops gardens
- Shuttle service to move people between North Port and South Port
- New road network with vehicular and pedestrian bridge over U.S. 151 and railroad into South Port
- Integration of park, trees, and green space along riverfront with higher intensity commercial uses
- Potentially incorporating museums focused on the railroad or Coast Guard
- Amphitheater located next to Ice Harbor
- Railroad buildings moved to the south end of the site

Cross Section of Parking Garage

High Density Design



Public Feedback Session

On April 11th, 2013 a second public input session was held at Dubuque's Grand River Center. The event's purpose was twofold. First, the session informed the public about the results of the initial public brainstorming session and the subsequent survey's results. Second, the session introduced the four land use designs to the public. The agenda for the event went as follows:

- Overview presentation discussing the following:
 - The basis of the project
 - The brainstorming event and survey results
 - The four design concepts and why they were chosen
 - The format of the evening and a discussion on the survey questions to be asked for each design concept.
- Specific description of each of the four design concepts. Every 15 minutes one design concept was discussed per table and four survey questions were asked for each design.
- After all four design concepts were reviewed everyone was given the last 10 minutes to question any of designs they wanted and complete a brief survey.

As public participants arrived they were asked to sign in, provided the opportunity to obtain a name tag, assigned a table, and given a survey packet with a copy of the four design concepts and event agenda. The survey asked attendees to consider three criteria for each design plan and then rank the designs from favorite to least favorite. After the introductory presentation, South Port group members presented detailed descriptions of each of the four designs to tables in fifteen

minute intervals. Each table was given the opportunity to ask questions and provide oral and written feedback.

The same marketing techniques and outreach was used for the feedback session as in the October brainstorming session. Thirty-seven community members attended and participated in the public feedback event. As with the initial brainstorming session, South Port area landowners and friends made up a large portion of the attendees, in this case nearly half. While all attendees participated in a positive and productive manner, the disproportional attendance of those with vested interests in South Port suggests the potential for the survey results to be skewed favorably towards the industrial design.

Feedback Session Room Setup



Session Feedback

Because of the unscientific nature of the survey, the analysis focuses on conveying the specific feedback garnered from the event and not the overall rank. First is a brief review of the overall survey results. As seen in the table below, when attendees were asked what their favorite design was most people chose the Design 1, the revitalized industrial alternative.

This was not indicative of general sentiment, however, as twelve people also selected the industrial design as their least favorite of the designs. Overall, the low density design received the lowest mean rank and second highest number of top choice votes. The high density design was the least popular while the medium density design was neither strongly liked nor disliked.

Survey Design Preferences

	Industrial	Low Density	Medium Density	High Density
Mean Rank	2.48	2.24	2.47	2.81
# of Top Choice Votes	12	8	3	6
# of Least Favorite Votes	12	3	2	10

General sentiment towards the four designs was mixed. Some respondents commented that ideas discussed in the public brainstorming session were not included. Specifically, there was strong support for continued industrial use in the South Port at the previous meeting but only one design plan considered industrial use.

“I attended the October meeting, where I believe a majority supported river based businesses needed to stay, especially Newt’s business. I did not see Newt’s business staying in the 4 designs. What happened?”

Other comments expressed concern that additional retail space would siphon businesses from what they perceived to be an already struggling downtown.

“You did not address the entertainment for in this area to my satisfaction. The North Port would be what without the Diamond Jo and the river museum? We need way more entertainment alternatives to draw people to Dubuque. More offices & more restaurants will only steal people & business from existing buildings & become empty buildings elsewhere.”

Several others agreed the non-industrial designs could be implemented in phases starting with beautification of the area and creation of green space. Eventually denser uses could be implemented if relocation of the switch station could be arranged. Other overarching comments suggestions varied wildly from stating high density development doesn’t belong in flood plains to the obligatory *“Leave Newt where he is”*.

In addition to a question on the overall design preference, there were four questions asked for each design. The same four questions for each design concept included the following:

Please check how much you like each category on a scale from 1 (strongly dislike) to 5 (strongly like):

- Proposed Amenities
- Land Use Allocation
- Transportation Options (including bike/walk path)
- Overall Concept

There was also a comment section for each question and many that took the survey provided comments. The feedback for each design is detailed in the following section.

Design 1 Feedback: Revitalized Industrial Port

Feedback on the revitalized industrial port design elements received equal amounts of like and dislike. The standard deviation between people’s ratings of each element was substantially higher than in each of the other three designs. This indicates respondents tended to score all design elements as either a one or five. Because most comments did not specifically critique design plan elements a potential conclusion is that people rated designs elements primarily based on their feelings toward the land use and not the specific design.

This conclusion is supported by the 0.4 average standard deviation that was observed across the four elements being rated. For example, someone who rated the proposed amenities element a one was highly likely to have rated the other three elements a one as well. Keeping this in mind, the average score for all industrial elements were either tied with or just slightly above the average score of all four design plans.



1 Design 1: Revitalized Industrial Port Survey Responses

	Proposed Amenities	Land use Allocation	Transportation Design	Overall
Design 1 average rating	3.2	3.1	3.3	3.2
Average rating of element for all four designs combined	3.0	3.1	3.3	3.1
Std. deviation of ratings for an element	1.4	1.5	1.4	1.3

Proposed Amenities Feedback

Feedback on the proposed amenities focused on the continued use of industrial space with some respondents expressing pleasure with the simple design while others commented the design was too simple and did not facilitate enough change. Others were concerned that the contrasting green space and industrial use could not coexist.

“I do like the wetland, fishing piers, and pedestrian hike/bike path. However, it would be hard for the public to enjoy these right next to an industrial area.”

One landowner commented during the small group discussions that the creation of the pedestrian walkway along the levee meant loading and unloading of barges along the main channel of the Mississippi could no longer occur. This would have a significant impact on the ability of current businesses in the South Port to continue operations.

“This and all other concepts do not allow for any boat access from the south port floodwall...this is a strong requirement for all 4 concepts.”

Land Use Allocation Feedback

Comments on land use honed in on the two contrasting viewpoints with half applauding the continued industrial use and the other half calling for more green space. Some did indicate they thought the contrasting uses could co-exist.

“Keep Newt”, “Move Newt”, “Encourage working river concept. Like green space option”

“Allow residents & visitors to see some river/railroad industrial area. There are areas that are interesting and historically important.”

Transportation Feedback

While the financial realities of installing a vehicular overpass in South Port was discussed, several people were not swayed and suggested an overpass was necessary for the success of the industrial port area.

“Provide consistent access by incorporating railroad overpass.”

Most agreed the connectivity of North Port’s pedestrian trail to South Port was a winning idea, echoing feedback received at the initial meeting and from the survey.

“Transportation connectivity (bike, pedestrian) is important, especially connecting existing trails.”

Final Comments

Overall this design was considered simplistic and was equally applauded and jeered for being such.

3D Image of Design 1, Revitalized Industrial Port Alternative



Design 2 Feedback: Low Density

The low density design was the most popular design with each of its elements rated equal to or higher than the overall average. Ratings were less volatile than Design 1 with few votes of 1 and many 4s and 5s, indicating across the board approval of the

design. Individual rating deviations remained low, a respondent tended to rate all elements the same, again suggesting people focused less on specific attributes and more on their overall approval of design or land uses.

Design 2: Low Density Survey Responses

	Proposed Amenities	Land use Allocation	Transportation Design	Overall
Design 2 average rating	3.2	3.5	3.3	3.3
Average rating of element for all four designs combined	3.0	3.1	3.3	3.1
Std. deviation of ratings for an element	1.2	1.2	1.2	1.3

Proposed Amenities Feedback

Overall people approved of the proposed amenities with several comments applauding the mix of green space with limited boutiques. Several people suggested the amphitheater be included in the low density design, which would have implications for the proposed residential space nearby.

As with all designs calling for retail space, there was concern that it would not be viable in the South Port or that it would only siphon businesses from surrounding downtown.

Land Use Allocation Feedback

The mean score for land use allocation in the low density model was significantly higher than that for any other design. There was strong backing for the high percentage of green space along the waterfront with limited other development. Though some commented a phasing process could eventually allow for more density as the area developed.

“This is a reasonable mix, keeping buildings near the road access and the park openness/green space separated.”

Transportation Design Feedback

There was a consensus that the proposed road running alongside the Ice Harbor would detract from what is a focal point in the South Port. Several attendees proposed eliminating the road or shifting it away from the Ice Harbor to make room for additional pedestrian access to the Ice Harbor. For the low

density plan there was consensus that surface parking should be limited.

Some attendees expressed concern about the lack of vehicular access into the area though many commented a pedestrian oriented design was appropriate for the site.

“I like the floodwall bike path and bridge connecting the path to North Port. However, I think more overpasses over the railroad & highway are needed to connect the S.P. with areas to the west.”

“Do like idea of ped mall & non-vehicular traffic plan.”

Final Comments

Overall this design was the most popular and the proposed attributes received generally positive feedback. Some concerns were expressed that the design would not attract significant tourism due to its low density but most respondents seemed to prefer a design that provided a natural harbor space that could be enjoyed by Dubuque residents.

3D Image of Design 2, Low Density Alternative



Design 3 Feedback: Medium Density

The medium density design did not illicit strong feelings from attendees. A large contingent gave the design across the board

2s, 3s, or 4s. The average scores for all design elements gravitated towards the overall average.

Design 3: Medium Density Survey Responses

	Proposed Amenities	Land use Allocation	Transportation Design	Overall
Design 3 average rating	3.0	3.1	3.2	3.2
Average rating of element for all four designs combined	3.0	3.1	3.3	3.1
Std. deviation of ratings for an element	1.1	1.1	1.2	1.2

Proposed Amenities Feedback

Residential space was a highly unpopular idea with attendees who commented that houses on the bluff offered a better view of the river and accessibility. The popularity of an amphitheater in the South Port, although not proposed in this design plan, also caused people to question whether residential space was a proper use given accessibility and noise concerns. Overall the amenities proposed for the medium density design were responded to favorable though not ecstatically.

“I like the fishing piers, sculpture park, and rooftop gardens.”

Land Use Allocation Feedback

The balance of green space and built area was generally viewed as ok. However, some commented accessibility could be an issue and that with green space being primarily in the southern tip of the South Port congestion could become a problem in the northern half.

“Seems pretty congested north of bridge with 16% buildings all on the north side of bridge.”

Transportation Design Feedback

The lack of immediate parking for the proposed residential structures was a reoccurring theme in attendees’ comments. The unwillingness of Dubuque citizens to walk for shopping or get home caused people to express concern that the shuttle service and overall focus on having a main street walkable feel to the area was not viable. Again the road running south of the Ice Harbor was unpopular with several attendees preferring it be removed entirely to allow for green space.

“Question whether the shuttle will be used effectively. May consider more underground parking to accommodate residents & occupants.”

“Like bike and walking trails & shuttles not so sure if there is enough car access.”

Final Comments

Overall, this designed was received with some unease, while most liked the concept there was concern about the market feasibility. One attendee suggested additional studies should be conducted to determine the potential tax revenue the site could generate and that the team determine how much parking this design would necessitate.

“In theory, I like the idea of creating a main street type space & mixed use, but I oppose digging into the port & building new structures. My preference is a native species & bike & ped focused transportation recreation area.”



3D Image of Design 3, Medium Density Alternative



Design 4 Feedback: High Density

The high density design, much like Design 1, the revitalized port design, was either strongly liked or disliked. However, in this case those who disliked the design seemed to outnumber those who liked it. With the exception of the transportation

element, the average score for every element was below average.

Design 4: High Density Survey Responses

	Proposed Amenities	Land Use Allocation	Transportation Design	Overall
Design 4 average rating	2.8	2.9	3.4	2.6
Average rating of element for all four designs combined	3.0	3.1	3.3	3.1
Std. deviation of ratings for an element	1.2	1.3	1.4	1.3

Proposed Amenities Feedback

An amphitheater was the most popular amenity in Design 4 with near universal support. There was a segment of attendees who expressed concern that the proposed retail amenities would not materialize and another that did not wish for the South Port to become an extension of the North Port.

“The public open space, fishing piers, bike paths and other amenities are great. Encourage lots of public involvement and pedestrian and bike access.”

Land Use Allocation Feedback

Feedback similar to that in amenities section was expressed with several noting this land use would cause overcrowding. While some attendees were excited for the South Port to become a vibrant hub of activity, several comments expressed concern that private players would crowd out the public space in this design.

Don't crowd the riverfront area too much (even though this is a high density concept). The attraction is the river (not so much at the North Port and there activities there). Make this more open, more natural, more simple.

One attendee suggested the building footprints be redesigned to maximize the amount of river view that could be captured by the residential spaces.

Transportation Design Feedback

The high density transportation design was widely popular with most of its support stemming from the proposed overpass. As with all designs attendees were overwhelmingly supportive of the riverfront trail extension.

“Finally!! We get traffic in and out of the area free flowing.”

“I like the road overpass idea a lot! The road layout makes good sense with multiple accesses to the S.P. Also, the floodwall trail idea w/ bridge over the harbor entrance is a good idea.”

Reservations were again expressed about the lack of parking and the viability of a shuttle service.

Final Comments

The final recommendation will incorporate several changes proposed at the feedback session. Road layouts and specific amenities will be reexamined given attendees suggestions to help create a plan that better meets the site and Dubuque citizen's needs. Attendees' rank of the overall designs will play a role in determining our selection of an adapted design plan, however, internal analysis and public preferences stated in the public survey will also be considered.

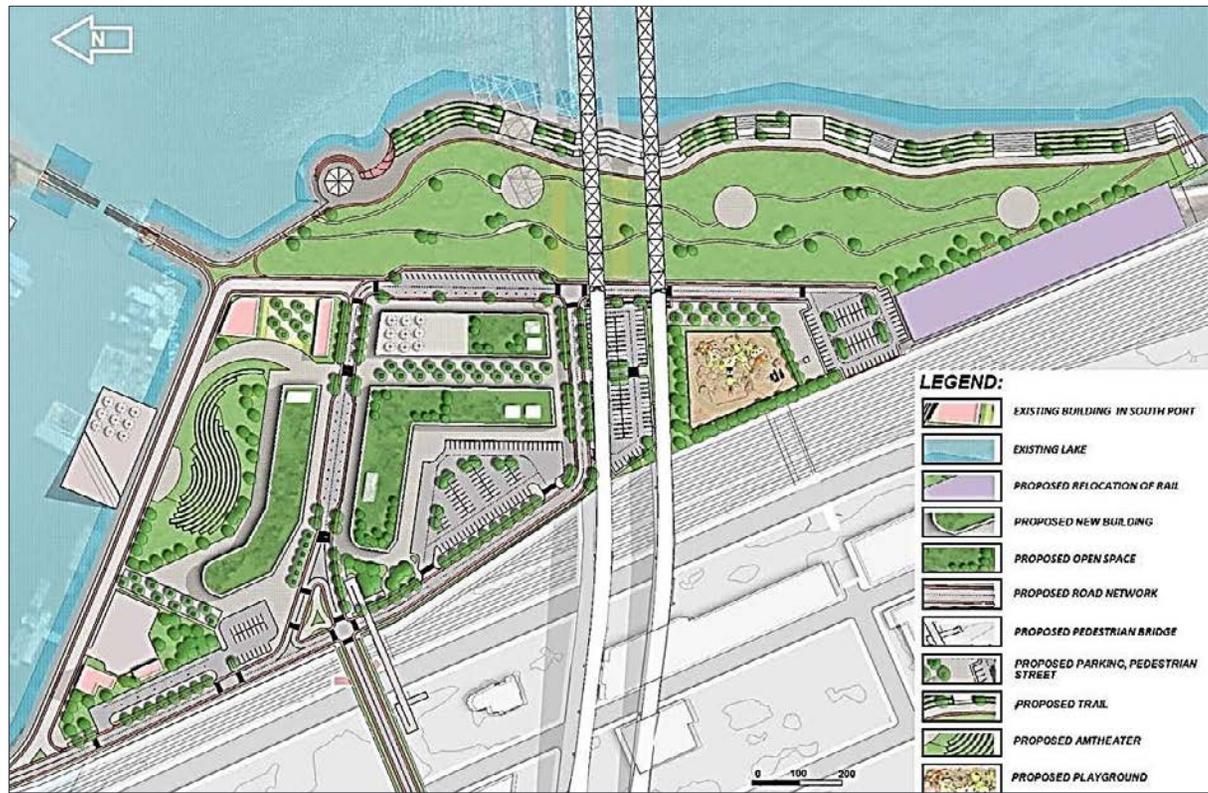
3D Image of Design 4, High Density Alternative



Final Recommendations

Reflecting on comments pertaining to the four design alternatives, the final recommendation for the South Port builds on Design 2, the low density design alternative, incorporating elements from other alternatives. While open space uses are the most physically suitable, citizens of Dubuque show a strong preference for a recreational attraction. Both uses can, and should be provided in the South Port. Therefore, the recommended design focuses on providing substantial open space, recreational opportunities, and pedestrian friendly

pathways. It provides convenient store-front parking with a simple road network. The vehicular road network flows in a circular path with bikeways and pedestrian paths alongside connecting one and two story commercial buildings to open spaces. Interconnectivity between the North Port and downtown is promoted by connected walkways and bike paths. Two existing historical buildings and the Coast Guard facilities remain (pink), with railroad administrative buildings moved to the southern end of the site (purple). The following section details specific elements of the recommendation.



Riverside Open Space

Through the public input process green/open space and recreational opportunities were suggested in the greatest frequency. The analysis of the area around the South Port shows an opportunity for the City to increase green/open space in the area, particularly near downtown. Many thriving downtown areas in similar cities have great green spaces with various recreational opportunities, as shown in the three case studies in Appendix B.

The recommendation sets forth the entire Mississippi Riverfront as green open space, with 50% of the total area as open space. Three sites located along a riverfront trail act to

pull the history of Dubuque's mining, river, and button manufacturing industries into central locations. The south end of the site will be restored into a wetland area. Large steps along the river allow pedestrian's closer access to the water.

Recommended open space features in the South Port focus on providing easy access to the river with natural and historical focal points. Specific features include:

- Riverfront trail
- Historical focal points along the Mississippi River
- Riverfront pedestrian steps
- Wetland restoration

Open Space Allocation

Design Element	Square Feet	Acres	Length (miles)
Total open and green space	701,515.8	16.1	
Open space along river	474,904.9	10.9	
<i>Bike route with trail and public space</i>	<i>75,088.7</i>	<i>1.7</i>	<i>1.28</i>
<i>Public space</i>	<i>19,085.2</i>	<i>0.4</i>	
<i>Green area</i>	<i>380,731.1</i>	<i>8.7</i>	
Green area along playground	49,247.3	1.1	
Playground	38,809.3	0.9	
Square with Amphitheater	83,554.2	1.9	
Other open space	55,000.0	1.3	

Green/Open Space Network



Transportation and Parking Network

Accessibility is a reoccurring issue for the South Port. A lower density design accommodates the current vehicular access points. However to promote everyday usage, the recommended

design adds a significant amount of pedestrian and bike options. A proposed shuttle service gives support for higher capacity events that come with large open spaces and recreational attractions. A revised road network also promotes circulation within the site.

Accessibility and Parking Allocation

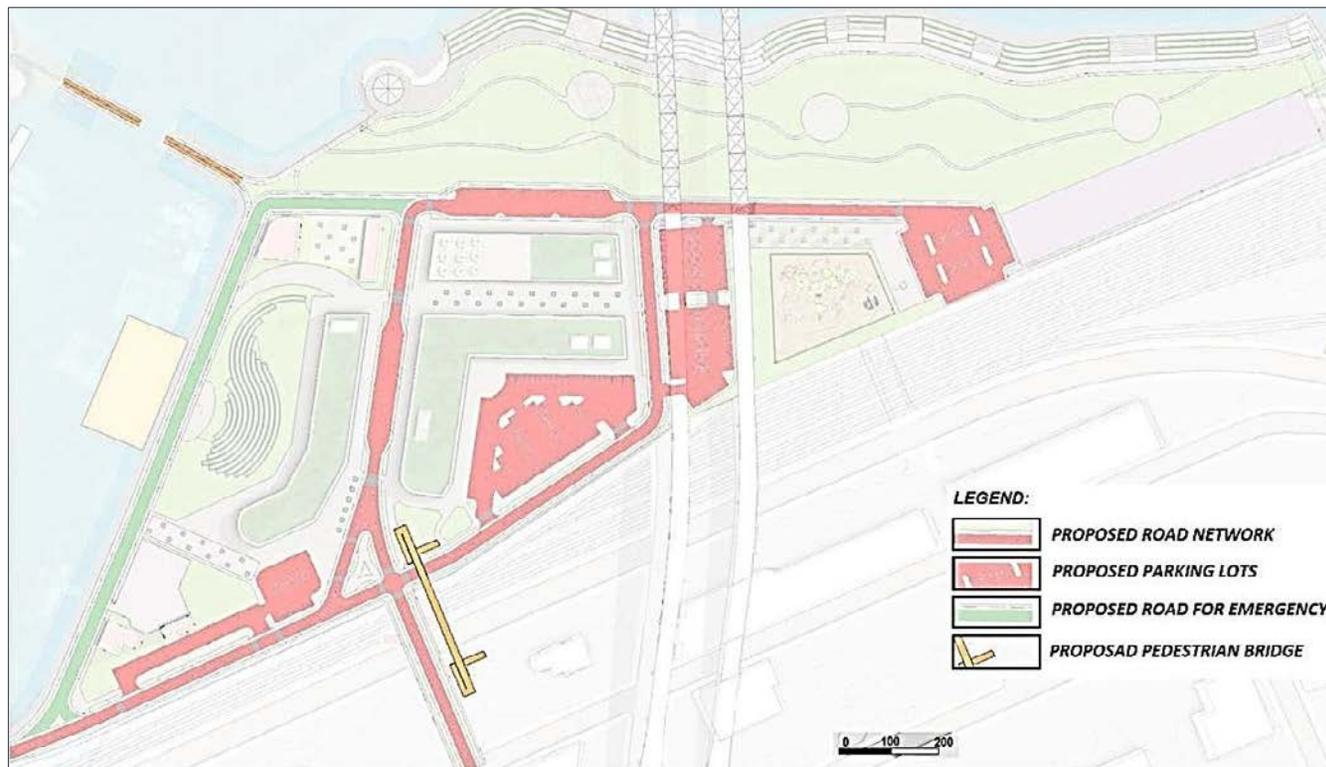
Design Element	Square Feet	Acres	Length (miles)	Parking Spaces
Road Network	282,631.4	6.5	4.56	
Existing vehicle roads	81,747.2	1.9	0.93	
<i>Special use road (E1st /Terminal)</i>	31,871.6	0.7	0.56	
<i>Jones Street</i>	21,174.0	0.5	0.21	
<i>Terminal Street</i>	28,701.6	0.7	0.16	
New vehicle roads	49,922.5	1.1	0.76	
<i>New Street</i>	38,763.7	0.9	0.04	
<i>Jones intersection expansion</i>	5,010.5	0.1	0.04	
<i>Intersection island</i>	6,148.3	0.1	0.05	
Non vehicle road along network	150,961.6	3.5	2.86	
<i>Pedestrian walkway between buildings</i>	35,753.7	0.8	0.68	
<i>Bike trails/sidewalks</i>	57,604.0	1.3	1.09	
<i>Pedestrian trails/sidewalks</i>	57,604.0	1.3	1.09	
Parking Area	166,019.2	3.8		362
Parking lot	136,417.0	3.1		276
<i>Parking (Big parking lot)</i>	58,209.0	1.3		107
<i>Parking (Under Julien Bridge)</i>	43,690.3	1.0		101
<i>Parking (South parking lot)</i>	34,517.6	0.8		68
Off street parking lot	13,818.6	0.3		59
<i>Jones Street parking</i>	4,691.82	0.1		20.0
<i>Terminal Street parking</i>	9,126.8	0.2		39.0
Shuttle bus stop/parking	15,783.6	0.4		27

The recommended road network flows in a circular path to help reduce traffic congestion. Two vehicular access points are provided through Jones Street and Ice Harbor Road. Ice Harbor Road along the south side of Ice Harbor is restricted for only pedestrians and bicyclists except under emergency circumstances for emergency vehicles. Many parking locations provide direct access to amenities. Over 350 parking spots are provided in the design. The number of spots can be increased or decreased to meet parking requirements of proposed developed buildings. For example, provide angle parking

instead of parallel parking along Jones Street. During events a shuttle service can run between the North Port and South Port to alleviate traffic and parking demands on the South Port. Specific features include:

- Circular road and sidewalk network
- Emergency access road along Ice Harbor (green shade)
- Surface lot parking near attraction areas
- Event shuttle service

Road Network



Pedestrian/Bike Network

Walkability and connectivity are staples in the recommendation. In continuation of accessibility, proposed bike and pedestrian paths run along all roadways in the South Port. Connections to a riverfront trail are made at multiple locations. The trail connects to the North Port trail via an Ice Harbor pedestrian/bike drawbridge and continues south to the Mines of Spain. Buildings are surrounded by sidewalks for great walkability and access to store fronts. A pedestrian only walkway between buildings will create a pedestrian mall

atmosphere. Connection to the downtown is supported by the pedestrian bridge over Highway 151 and the railroad. Specific elements of the pedestrian network include:

- Approximately 1.1 miles of bike and pedestrian paths
- Connection to North Port and the Mines of Spain
- Bike paths and sidewalks alongside all roads
- Bike racks
- Railroad/Hwy 151 pedestrian overpass
- Pedestrian only walkway between buildings

Pedestrian/Bike Network



Jones Street Entrance with Pedestrian Overpass



View West of Ice Harbor



Building Space and Design

Citizens prefer a combination of various commercial features. The location near downtown, the North Port, and Ice Harbor

provide an opportunity for consistent pedestrian traffic and visibility for commercial to be successful. Smaller intensity buildings are recommended for businesses that complement open space and river activities.

Building Allocation

Land use type	Square Feet	Acres	Total building floor area (sq. ft.)
Build up area	285,786.8	6.6	352,127.3
New Buildings	167,135.3	3.8	240,831.8
<i>Building A Block (2 Stories) north of Jones Street</i>	<i>54,129.2</i>	<i>1.2</i>	<i>79,009.3</i>
<i>Building B Block south of Jones Street</i>	<i>113,006.1</i>	<i>2.6</i>	<i>161,822.5</i>
<i>2 Story Building</i>	<i>71,129.2</i>	<i>1.6</i>	<i>113,000.6</i>
<i>1.5 Story Building with Patio</i>	<i>41,876.9</i>	<i>1.0</i>	<i>48,821.9</i>
Existing Buildings	55,647.7	1.3	111,295.0
Railroad Building Relocation	63,003.7	1.4	N/A

Specific building space features include:

- Building block A is parallel to Ice Harbor on the North end of Jones Street
- Building block B contains two buildings in the center of the site on the south side of Jones Street
- All development follows North Port design standards
- Store front shops and restaurants
- Office spaces on second floors
- Rooftop gardens

One and two story buildings are recommended to be used for commercial use, such as retail, restaurants, and office space. Using the design standards for the North Port development will preserve connectivity between the Port areas. A listing of the current design standards are listed in Appendix F. The recommendations also call for rooftop gardens designed using LEED practices for public access. The building closest to the Mississippi River features a rooftop patio used as an outdoor dining area. Two buildings currently in the South Port remain on the northeast corner of the site.

Aerial View of Buildings and Entertainment

*Entertainment and Recreation*

Recreation opportunities were preferred by Dubuque citizens. This design works to give opportunities for outdoor recreation to all ages. For Dubuque's youth citizens a playground is located to the south of the developable area. An amphitheater rated high by residents and is placed facing the Ice Harbor. The amphitheater is a multi-use area for everyday enjoyment to view Ice Harbor and for specific events such as concerts or festivals. The proposed amphitheater has a capacity around

3,500-4,000 people, counting built-in seating and open space for temporary seating. A pier is built out into the Ice Harbor area to access harbor water through canoe and kayak docking, fishing, as well as a stage area for the amphitheater. Along the riverfront, land grades from Terminal Street up to the top of the flood wall with large steps along the Mississippi River for closer access. An identical band shell is placed south of the flood gate to provide symmetry between North and South Port.

Playground on the South End



Other Uses Allocation

Land use type	Square Feet	Acres	Length (miles)
Additional development	280,625.4	6.4	0.72
Shadow	6,361.7	0.1	
Pier	26,385.8	0.6	
Built up access along river	247,397.8	5.7	0.72
Fishing dock	480.0	0.01	

Ice Harbor Amphitheater



Conclusion

The 2002 Port of Dubuque Master Plan set the stage for the North Port redevelopment to become a regional attraction. The 2002 Plan for the South Port called for mixed-use residential and commercial development, with only three acres of green space. The year-long study reveals the vision for the redevelopment of the South Port has evolved. The highest and best use now incorporates significant open space with limited commercial use and no residential.

Many factors went into the final low density, recreational focused recommendation for the South Port. Three forms of public input provided insight into the current citizen visions. Vehicular access into the South Port accommodates low density development, however, the recommended design provides the opportunity for a vehicular overpass if there is a future demand for more intense development. Currently, however, highway and railroad noise inhibits extensive residential development. If residential use is considered something the City of Dubuque needs or desires a noise mitigation study should be conducted.

Going forward, Dubuque needs to continue to have open discussions with Canadian Northern Railroad about implementing the designs, as well as private and public stakeholders. To align with sustainability goals, LEED standards are recommended for all design implementation actions. A suggested action plan and specific LEED considerations are detailed in Appendix A. Lastly the City should seek funding sources for brownfield remediation and transportation similar to those when developing the North Port.

The North Port of Dubuque and Julien Dubuque Bridge are iconic features in Dubuque. The South Port now has the opportunity to become an iconic feature as the aesthetically pleasing green gateway into Dubuque. The design plan incorporates all three pillars of sustainability: environmental integrity, social/cultural vibrancy, and economic prosperity. The recommended highest and best use for the South Port exemplifies the City's designation as a national leader in sustainability.

Appendices

A: Concluding Considerations for Implementation

Action Plan

The South Port has many different obstacles and challenges that inhibit development to take place in a single project. In order to implement a colossal project, a brief action plan with three different categories is shown in the following table.

Action Plan		
Category	Action	Timeline (Years)
Environmental Cleanup	Brownfield Remediation	1-10+
Accessibility	Construct New Roads/Pave Existing Roads	< 1
	New Floodwall with Pedestrian Path	2-3
	Floodgate Pedestrian Bridge	2-3
Building Construction	Construct Focal Point Attractions	1-2
	Construct Buildings for Businesses	2-3

Environmental Cleanup

Due to the industrial previous uses of the land, the South Port has been designated as a brownfield site. There are two factors that determine the amount of time needed for remediation. One of the factors is the extent of the contamination of the ground and water beneath the surface. The second factor is determining the future land use of the site. For example, if the land is going to be vacant and consist of a parking lot or open space, the land does not have to be extensively remediated as there will be minimal ground disturbance to expose the contaminants to the surface. However, if there are going to be structures built on top of the particular site, the land will need to be fully remediated.

Accessibility

Once the site has been remediated of pollutants, the second action category is to provide accessibility to the site. The first action is to pave all of the roads needed for the development. This will also include moving the railroad administration building to the new location. This should take less than a year to complete. The next action will be to construct a new floodwall with a pedestrian path and a floodgate pedestrian bridge. This may take two to three years to complete and can be done concurrently with paving new roads.

Building Construction

The third and final action category is to begin construction of the focal point attractions and buildings for businesses. The focal point attractions will be the three monuments within the pedestrian path along the Mississippi River, the amphitheater along the Ice Harbor, and the pier with the activity stage. We estimate that these attractions will take roughly 1-2 years.

The three new buildings and renovation of the two older buildings will be the final action. Construction and renovation have been estimated to take 2-3 years. As with accessibility, the construction of focal point attractions and the construction and renovation of buildings can be done concurrently with the construction of new roads and paving of existing roads. If each action took the maximum length of time and were done concurrently, the entire project can be accomplished in 13 years.

Philosophy of the design and layout

In 2006, Mayor Roy D. Buol and the City Council made the Sustainable Dubuque Initiative their top priority. In 2009, the City and IBM partnered to form the Smarter Sustainable Dubuque campaign. In part of the Smarter Sustainable Dubuque campaign, Dubuque's primary goal is to become "one of the first "smarter" sustainable cities in the U.S." (IBM, 2009)

Case Study – West Union, IA

To align Dubuque's sustainability goals with the development of the South Port, the City of West Union, Iowa was studied which has similar goals of achieving sustainability and has invested in green design for revitalizing the city's downtown. The City of West Union is one of Iowa's green pilot projects for Main Street Iowa. In 2007-2008, the Main Street Iowa identified several factors that presented a "unique opportunity" to implement green and sustainable infrastructure in the town of West Union, Iowa (IED, 2012). The factors identified are listed below from the Iowa Economic Development West Union Pilot Project Summary:

“First, the city determined in 2007 the need to replace streets, sidewalks, utilities, and stormwater management systems in the downtown as a matter of first priority.

Second, recent events throughout the country have underscored the vulnerability of conventional infrastructure and land management practices, resulting in flooding, property loss, and environmental degradation. A range of applications and materials in urban green infrastructure sustainable practices are becoming widely available throughout the country. These practices improve the performance and reduce the perpetual maintenance and operations costs of community infrastructure, while doing a superior job of protection and restoration of the environment and ecological functions.

Third, interest in promoting improved public health, more efficient use of limited infrastructure dollars and decreasing transportation costs is driving a national complete streets movement placing an emphasis on streets designed and operated to enable safe access for all users including pedestrians, bicyclists, and motorists of all ages and abilities.

Fourth, rapidly rising energy costs in previous years has placed a national emphasis on energy efficiency and local energy generation.

Fifth, studies have shown that communities are better served from a fiscal standpoint with pedestrian scale, multi-purpose streets. Retail sales are better in shopping areas served by safe, attractive streetscapes. Tourists are drawn to these kinds of

Concluding Considerations and Appendices

authentic town settings. Property values are increased as well.

***And, finally,** In October 2007, the Iowa Department of Economic Development's (IDED) Main Street Iowa program completed a Technical Assistance Visit to advise West Union about the potential for multipurpose pedestrian-scale streetscape improvements. In the winter of 2008 IDED was seeking one or more communities to be a Pilot Green Community. The department realized that West Union with its existing interest in streetscape and other infrastructure improvements combined with the local leadership and coordination of the Main Street West Union organization was perfectly poised to be a Pilot Green Community. IDED selected West Union in March 2008 as a Pilot Green Community to demonstrate an integrated, multi-faceted approach to green, sustainable revitalization of downtown. With the community on board as a Green Pilot Community, IDED hired consulting firm Conservation Design Forum to facilitate a 2.5 day visioning session in June 2008. The result of the June 2008 visioning session was the initiation of many of the project concepts included today as well as development of the community's First Principles for future development activities." – (IED, 2012)*

These factors allowed West Union to be chosen for the Green Streetscape Pilot Program by Main Street Iowa. As part of the first priority factor and with ideas from the visioning session in 2008, several key infrastructure improvements have incorporated sustainable features and technology. The infrastructure improvements cover a 6 block radius in the downtown commercial district and include sustainable

infrastructure such as: a permeable pavement storm drain system, geothermal energy, streetscape features, and green roofs.



Source: IED, 2013



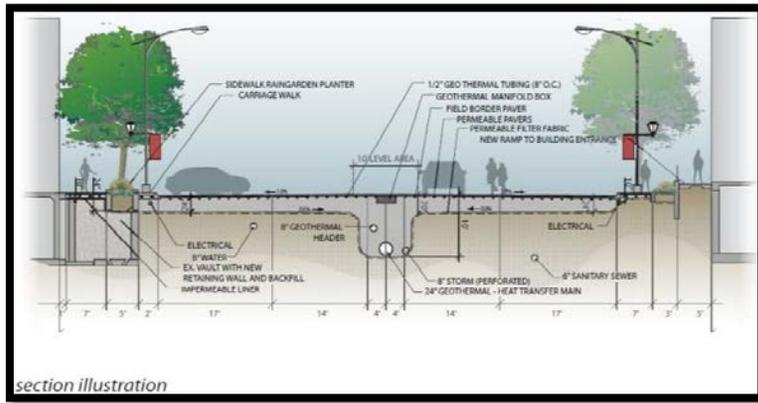
Source: IED, 2013

The permeable storm drain system uses permeable pavers to allow water to absorb into the ground up to a certain amount. This helps replenish ground water and reduce pollutants, soil erosion, and flooding of nearby waterways. Other features, such as rain gardens and bio-swales, help reduce storm water runoff as well. For an added bonus, these rain gardens were

Concluding Considerations and Appendices

designed to bump out of the sidewalk to reduce traffic speed and create a pedestrian friendly atmosphere.

Cross Section of Geothermal Piping



Source: IED, 2013

Geothermal energy was a primary feature of the project for business owners. Under the permeable pavement, pipes that carried water were buried 8ft below the surface where the temperature is a constant 55-60 degrees throughout the year. The water in the pipes absorbs the heat (or coolness during the summer) from the earth and transferred it to a machine that converts the heat/coolness from the water to air ducts that heat/cool the buildings. This is not only economically sustainable as it saves business owners money on utilities, but also environmentally sustainable by using renewable energy. The piping is connected to all of the buildings within the 6 block radius, however, business owners are responsible for updating their building's infrastructure to utilize this system.

Permeable Sidewalks



Source: IED, 2013

Colored Pavers for Crosswalks



Source: IED, 2013

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Rain Garden



Source: IED, 2013

Several streetscape features were incorporated to produce a pedestrian friendly downtown. These features include pedestrian scaled LED street lights, wider sidewalks, and rain gardens. Street lights closer to the ground produce a pedestrian scaled streetscape. Colored permeable pavers were used to distinguish crosswalks from the rest of the roadway while also reducing the need for painted crosswalks. As previously mentioned, rain gardens are located at the street corners to bump-out into the street to shorten the distance of the crosswalk to give security to pedestrians.

Green roofs were incorporated on several buildings to help reduce storm water runoff and to reduce the heat island effect in the urban area. In some cases, green roofs were used to produce open space for customers of buildings with public access to the roof.

Other aspects, such as an amphitheater and façade improvements, were also part of the Green Pilot Project. The project's final costs totaled \$10,295,028. Applications for various grants and donations from organizations helped raise the funds for the project. The City of West Union paid \$2,368,499 of the project. The project was scheduled to be completed in late 2012. According to West Union's website, there is a waiting list of commercial business owners that want to relocate/open a business in the downtown due to the new improvements.

LEED as a Sustainability Template

Taking a step further than the West Union Pilot Project, Dubuque can incorporate a LEED rating system as a sustainability template into the designs for the South Port. LEED is an acronym for Leadership in Energy and Environmental Design. The LEED rating system is used as a universal green building measurement standard that is "designed for rating new and existing commercial, institutional, and residential buildings" for sustainability (Josh Busard).

LEED's primary goal is to serve as a tool to improve the triple bottom line (economy, environment, and society) by "help[ing] create high-performance, more sustainably built environments by providing a framework for design, construction, and evaluation" (GBLCC, 1). These goals align with Dubuque's three pillars providing a sustainability template for the redevelopment of the South Port. Today, LEED is on version 3 and has evolved into several LEED rating systems. For the purpose of redeveloping the South Port, the LEED 2009 for Neighborhood Development (ND) rating system serves as the

Concluding Considerations and Appendices

sustainability template if residential development becomes feasible for the South Port in the future.

LEED-ND is organized into five separate sections: Smart Location and Linkage (SLL), Neighborhood Pattern and Design (NPD), Green Infrastructure Buildings (GIB), Innovation and Design Process (IDP), and Regional Priority Credit (RPC). For the purpose of providing a basic template for sustainable development, the focus is only on the SLL, NPD, and GIB prerequisites and credits as they are more suited to the South Port design. There are a possible 110 points that can be achieved and 4 levels of LEED certification. The levels include: Certified (40-49 points), Silver (50-59 points), Gold (60-79), and Platinum (80+ points). Points from credits are optional to obtain; however, prerequisites are required for all levels and do not earn points.

Smart Location and Linkage

The Smart Location and Linkage (SLL) category promotes sustainability through site location and linkage to the surrounding development. Site location characteristics include: infill sites, brownfield, ecological preservation, access to public transportation, etc. Linkages of the site to the surrounding community include: housing and jobs proximity, public transportation proximity, etc. The primary focus is to avoid unsustainable sites for development. As defined by USGBC, unsustainable sites include developing on a greenfield, prime agricultural land, wetlands, protected habitat, encroachment on water bodies, etc.

Applicable Credits

LEED Applicable Prerequisites and Credits	
Smart Location and Linkage	Points
Prerequisite 1: Smart Location	Required
Prerequisite 2: Imperiled Species and Ecological Communities Conservation	Required
Prerequisite 3: Wetland and Water Body Conservation	Required
Prerequisite 4: Agricultural Land Conservation	Required
Prerequisite 5: Floodplain Avoidance	Required
SLL Credit 1: Preferred Location	1-10 Points
SLL Credit 2: Brownfields Redevelopment	1-2 Points
SLL Credit 3: Locations with Reduced Automobile Dependence	1-7 Points
SLL Credit 4: Bicycle Network and Storage	1 Point
SLL Credit 5: Housing and Jobs Proximity	1-3 Points
SLL Credit 6: Steep Slope Protection	1 Point
SLL Credit 7: Site Design for Habitat or Wetland and Water Body Conservation	1 Point
SLL Credit 8: Restoration of Habitat or Wetlands and Water Bodies	1 Point
SLL Credit 9: Long-Term Conservation management of Habitat or Wetlands and Water Bodies	1 Point

Source: LEED – ND 2009

The location of the South Port offers many opportunities for achieving prerequisites and credits in this category. There are five prerequisites and 27 possible credit points in this category, as shown above. The South Port meets the majority of the prerequisites due to the site being previously developed. However, for Prerequisite 2: Imperiled Species and Ecological Communities Conservation, a survey of the land for imperiled species by the Natural Heritage Program and state fish and wildlife agencies should be conducted to determine whether the

Concluding Considerations and Appendices

South Port is a habitat for endangered or threatened species. Whether or not the site contains endangered or threaten species habitat, there are several options that can be taken to achieve this prerequisite. As this is a brownfield site, this may not be a concern for this location.

Credits 1 and 2 are achievable based on the site location and being previously developed. The site sits in the downtown of Dubuque and has been previously developed by heavy industry. Due to the history of the land uses in the South Port, the area is considered to be a brownfield site. A minimum of five points for Credit 1 and a minimum of one point for Credit two are possible.

Credits 3 and 4 recommend providing alternative modes of transportation to the personal vehicle. For Credit 3, the number of points earned depends on the number of trips generated by existing public transit bus stop locations within $\frac{1}{4}$ of a mile from the front doors of residential buildings. A minimum of 60 weekday trips and 40 weekend trips are required to achieve 1 point. Credit 4 recommends locating the project within $\frac{1}{4}$ of a mile from the project boundary to an existing bike network and within three miles of ten diverse uses. Being located within downtown, achieving a minimum one point for Credit 3 and Credit 4 are possible.

Credit 5 encourages communities to have a mixture of housing and employment opportunities. Our recommendation includes both a residential and commercial component to our layout. There are three options that range from including affordable housing for three points, developing 30% of the total square footage for residential for two points, or developing 30% of the total square footage for nonresidential of the total development

for one point. Depending on the discretion of the developer or conditions imposed by the city to the development, a minimum of one point is possible.

Credits 6, 7, 8, and 9 may or may not be applicable based on the topography of the land and requires a survey to be conducted by the Natural Heritage Program and state fish and wildlife agencies to establish significant habitats. However, since the site is relatively flat with no significant slopes and is considered to be a brownfield site reducing the likelihood of being a significant habitat, achieving one point from each of the four Credits are possible for a total of four points.

Neighborhood Pattern and Design

The Neighborhood Pattern and Design (NPD) category evaluates the overall design of the neighborhood and connectivity between uses. Reducing car dependence, promoting mixed-use, and conserving land by building a compact development are the key elements of sustainability this section addresses. There are four prerequisites and 44 possible credit points in this section.

Concluding Considerations and Appendices

LEED Applicable Prerequisites and Credits	
Neighborhood Pattern and Design	Points
Prerequisite 1: Walkable Streets	Required
Prerequisite 2: Compact Development	Required
Prerequisite 3: Connected and Open Community	Required
NPD Credit 1: Walkable Streets	1-12 Points
NPD Credit 2: Compact Development	1-6 Points
NPD Credit 3: Mixed-Use Neighborhood Centers	1-4 Points
NPD Credit 4: Mixed-Income Diverse Communities	1-7 Points
NPD Credit 5: Reduced Parking Footprint	1 Point
NPD Credit 6: Street Network	1-2 Points
NPD Credit 7: Transit Facilities	1 Point
NPD Credit 8: Transportation Demand Management	1-2 Points
NPD Credit 9: Access to Civic and Public Space	1 Point
NPD Credit 10: Access to Recreation Facilities	1 Point
NPD Credit 11: Visitability and Universal Design	1 Point
NPD Credit 12: Community Outreach and Involvement	1-2 Points
NPD Credit 13: Local Food Production	1 Point
NPD Credit 14: Tree-Lined and Shaded Streets	1-2 Points
NPD Credit 15: Neighborhood Schools	1 Point

Source: LEED - ND 2009

Prerequisite 1, 2, and 3 require that the development be compact and walkable. These are accomplished by locating entrances of buildings closer to the street, providing a height-to-street ratio of 1:3, and have pedestrian walkways throughout the development. By keeping the same road network, we were able to accomplish this in our recommended site layout. By achieving more options to provide a more compact and walkable environment, NPD Credits 1 and 2 can be achieved.

Credit 3 will be achieved as the area is zoned for mixed-use development. If residential is incorporated later on, this location will become a true mixed-use area and will achieve these credits.

Credit 5 recommends reducing surface parking. Our recommended layout will have limited parking spaces. This will help us achieve this credit. For larger events that will take place in the South Port, an optional shuttle service will be implemented to shuttle those who park in the North Port to the event in the South Port.

Credits 7 and 8 require projects to use alternative forms of transportation by providing new bus stop shelters within the project. In order to encourage usage of these transit options, it is recommended that there is an incentive to use public transit within the project. There are five options for a developer to choose from to acquire these points in the LEED-ND guide.

Credits 9 and 10 will be incorporated in our recommended layout. There will be open public spaces along the riverfront closest to the floodwall. In the low, medium, and high density layouts, there are plazas located between buildings providing more public spaces.

Credits 11 and 12 will be for the developer to pursue to accommodate the requirements needed to acquire these credits but are still applicable to the redevelopment of the South Port. Credit 13 may also be applicable as it allows the option to locate a farmers market within a half mile radius. Credit 14 requires tree-lined streets which we have incorporated in our recommended design to provide a “main street feel” the citizens of Dubuque have rated highly on our public survey.

Concluding Considerations and Appendices

Credits 6 and 15 will not be applicable due to the limited amount of space within the project area. Schools require large amounts of land to accommodate the building and outdoor space. Determining where schools are constructed is also out of the hands of the developer and the city.

Green Infrastructure Buildings



Source: www.jetsongreen.com

The Green Infrastructure Buildings (GIB) category encourages reduction of a building's carbon footprint. By incorporating energy and water efficient technologies, new and renovated buildings will significantly reduce their consumption of energy and water as compared to conventional buildings. There are four prerequisites and 29 possible credit points in this section as shown in the table to the right.

<u>LEED Applicable Prerequisites and Credits</u>	
Green Infrastructure Buildings	Points
Prerequisite 1: Certified Green Building	Required
Prerequisite 2: Minimum Building Energy Efficiency	Required
Prerequisite 3: Minimum Building Water Efficiency	Required
Prerequisite 4: Construction Activity Pollution Prevention	Required
GIB Credit 1: Certified Green Buildings	1-5 Points
GIB Credit 2: Building Efficiency	2 Points
GIB Credit 3: Building Water Efficiency	1 Point
GIB Credit 4: Water-Efficient Landscaping	1 Point
GIB Credit 5: Existing Building Resue	1 Point
GIB Credit 6: Historic Resource Preservation and Adaptive Use	1 Point
GIB Credit 7: Minimized Site Disturbance in Design and Construction	1 Point
GIB Credit 8: Stormwater Management	1-4 Points
GIB Credit 9: Heat Island Reduction	1 Point
GIB Credit 10: Solar Orientation	1 Point
GIB Credit 11: On-Site Renewable Energy Sources	1-3 Points
GIB Credit 12: District Heating and Cooling	2 Points
GIB Credit 13: Infrastructure Energy Efficiency	1 Point
GIB Credit 14: Wastewater Mangement	1-2 Points
GIB Credit 15: Recycled Content in Infrastructure	1 Point
GIB Credit 16: Solid Waste Management Infrastructure	1 Point
GIB Credit 17: Light Pollution Reduction	1 Point

Source: LEED-ND 2009

Concluding Considerations and Appendices

The GIB category has four prerequisites that require at least one LEED certified building and have at least 90% of the floor area for non-residential buildings and 90% of residential buildings be energy and water efficient under LEED guidelines. Prerequisite 4 requires all construction activity to use pollution prevention measures during the construction of new buildings.

Credits 1, 2, and 3 are applied if developers exceed prerequisite guidelines by certain percentages. Points for these credits are determinant based on the developer. Credit 4 recommends reducing potable water usage for landscaping by 50% from a calculated midsummer baseline case. To achieve this 1 point credit, the development can harvest rainwater or reuse gray water from showers/sinks to irrigate landscapes.

Credit 5 and 6 refer to reusing current buildings within the site. Currently, there are two brick buildings that are occupied by Newt Marine. In each of our proposed layouts, we incorporated these buildings to be reused to merge historic Dubuque with the future development of the South Port. Although these buildings are not on the historic register, the city plans to have these buildings reviewed to see if they qualify in the future and will be eligible to achieve 1 point.

Credit 7 requires that 100% of the development footprint be constructed on areas that have been previously developed. The credit also requires a survey be conducted to determine if there are any trees in good or excellent condition, as defined by USGBC, to be preserved. Most of the trees located in the South Port surround the Julien Bridge to the North and South as the bridge crosses over the railway. Our recommended layout will incorporate these trees as open space and will be preserved.

Credit 8 is determinant based on innovation and technology that can be applied to achieve this credit. In order to earn points, the site must be able to retain water (of the development footprint) within the 80th percentile of rainfall on a given day for the region. Due to the South Port being close to the Mississippi River, the Ice Harbor, and having a high water table, this Credit is challenging to achieve. However, by incorporating rain gardens, green roofs, and reusing rainwater to flush toilets and irrigate the landscape, this may be possible to achieve.

Credit 9 involves reducing the heat island effect within the site. The heat island effect is where the urban built environment (buildings, concrete, and asphalt) absorbs heat from the sun which increases the temperature as compared to surrounding suburban/rural areas. To reduce the heat island effect, building materials for roofs will need to have a solar reflectance index (SRI) of at least 29 for steep roofs or 78 for low roofs for at least 75% of the total roof area of all buildings. Green roofs, permeable pavement, shaded open areas, and tree canopies can also help reduce the heat island effect, which are incorporated into our proposed layout.

Credits 10 and 11 reduce energy consumption from local power stations that generally burn coal to generate electricity. By constructing new buildings at an angle within 15 degrees of geographic east-west, the buildings can utilize passive and active solar strategies to heat or cool the interior of the buildings. However, due to space limitations and accessibility issues, Credit 10 will most likely not be achieved. Generating on-site energy from solar or wind to offset 5% of the project's energy consumption is possible by adding solar panels to rooftops and small wind turbines throughout the South Port.

Concluding Considerations and Appendices

Credit 12 requires innovative strategies to achieve 2 points. “A district heating/cooling system is needed for space conditioning and/or water heating for at least two buildings for at least 80% of the project’s annual heating and/or cooling consumption that will be provided by the district plant” (LEED-ND, 121). Credit 13 can be achieved by constructing new traffic lights and street lights that use energy efficient LED bulbs and reduce energy consumption from “water and wastewater pumps to achieve 15% annual energy reduction” (LEED-ND, 122).

Treating and reusing wastewater from new buildings by 25% will earn 1 point from Credit 14. If increased to 50%, 2 points will be earned. Credit 15 and 16 encourage product reuse by using recycled content within the construction of the new buildings and by having recycling stations for future occupants to reduce recyclable waste from landfills. By utilizing these strategies, the site will earn 2 points.

Finally, by reducing light pollution onto surrounding areas, Credit 17 is possible to achieve. This will depend more on the design of the lights for the streets, buildings, and signs. There are many different designs that will be able to achieve this credit and is up for the city and developer to decide on.

Conclusion

The South Port is in a prime location and has the potential to meet all of the prerequisites and the majority of the credits required to become LEED certified. Since the City owns the land, the City can require that any redevelopment of the South Port achieve LEED certification. It is important to note that the Neighborhood Development rating system we chose for LEED

certification requires residential to be included in the development.

If the site does not include residential, another rating system would have to be used and will pertain to each individual building instead of the entire development. Regardless of the rating system used, if LEED certification is pursued, the development will achieve 9 of the 11 principles under the sustainability pillars Dubuque has adopted and may become a pilot project for future sustainable developments within Dubuque.

B: Redevelopment Case Studies

City of Sioux Falls

The Sioux Falls redevelopment project is a decade old initiative funded by the Federal Transportation Administration designed to purchase and redevelop Northern Santa Fe Railroad's downtown switch station into a mixed-use area (City of Sioux Falls).

Sioux Falls Railroad Map



Source: City of Sioux Falls

Still in its design stage, the project has experienced substantial delays and setbacks. Significant barriers to redevelopment have been apparent from the start. The project's first challenge was securing funding for the land purchase. After establishing a framework for redevelopment, Sioux Falls successfully lobbied Congress for a \$40 million dollar federal earmark. Federal

funds come with strings and prior to breaking ground substantial environmental assessments were required to evaluate redevelopment's effect on the following resources:

- Historical and cultural resources
- Endangered/threatened species
- Floodplain
- Hazardous materials and contamination
- Parks
- Noise and vibration

The Sioux Falls case highlights the challenges of dealing with railroads and the federal government. Joshua Peterson, head engineer of the redevelopment effort offered the following advice after discussing the Dubuque redevelopment plan. First, expect substantial delays if you seek federal money but don't expect federal funding in today's political climate. Second, if the railroad will be impacted by South Port's development be sure to engage them early on in the process.

City of Stoughton

Stoughton is a city of 13,000 people just south of Madison, Wisconsin. Its Railroad Corridor Redevelopment site is located downtown extending north of the Yahara River and east along Dunkirk encompassing approximately 30 acres. Current land use is predominately light industrial in various states of disuse. The City owns approximately half of the land with the other half in the hands of private business. In contrast to the South Port, there has been significant private and public interest in redevelopment of the riverfront. However, a lack of connectivity and need for a unified public vision have slowed private investment leaving it in a similar stagnant position.

Concluding Considerations and Appendices

The Stoughton Master Plan demonstrates a well-coordinated process that gathers input from stakeholders and focuses on implementing sustainable measures when possible. Similar to the South Port, Stoughton's Railroad Corridor struggles with the perception that it is not a part of downtown. Important lessons can be gleaned from how Stoughton is battling the perception and other negative stigmas that come with former industrial areas. The Sioux Falls process demonstrates several problems that can occur in redevelopment projects. Whereas, Stoughton's process is a good yardstick from which to measure Dubuque's own South Port redevelopment plans.

City of Wausau

Wausau, population 40,000, is best known for its transformation from industrial roots into the forefront of the sustainable development movement. The River Edge Master Plan was initiated by Wausau in 1995 with the intention of increasing public access to the river, improving the river's ecological quality, and developing recreational uses on and along the river (Citizen Survey Results). To accomplish the goals, the City rallied public support and utilized a zoning overlay designed specifically to accomplish the aforementioned goals.

City of Stoughton Redevelopment District



Source: City of Stoughton

Stakeholder Input Process

Sioux Falls' public input process has not been a smooth ride. While some key stakeholders were involved in the Northern Santa Fe Railroad's relocation attempt early on in the redevelopment process, others have voiced concern over their exclusion. Once engaged, getting stakeholder buy-in in the project has been another challenge. Northern Santa Fe Railroad (NSFR) has publicly declined to take ownership of the project explicitly stating it is the City's concern, not theirs. The late engagement of Sioux Falls' citizens may partially explain the frustration voiced by citizens to local TV stations and blogs on the project (Public Hearing).

In July 2006, five years after the project's inception, Sioux Falls held their first public meeting to discuss the area's future land use. The environmental studies precipitating the meeting operated on a number of land use assumptions made by previous city officials. Joshua Peterson, a city engineer involved in the NSFR negotiations, notes substantial city staff turnover has contributed to the limited public engagement prior to federal money being earmarked for the project in January 2006 (Josh Peterson, 2012).

Public engagement picked up pace as the project crawled forward in the late-2000s. Stakeholder engagement sessions to date include:

1. Public Meeting (July 2006)
2. Public Meeting (July 2007)
3. Open House (October 2008)
4. Downtown Developer Meeting (March 2008)
5. Neighboring City Presentations (October 2010)
6. Public Meeting (February 2012)

Overall, it's difficult to determine how much blame for frequent project delays and overspending result from a lack of a unified community vision and how much is inherent in a complex federally funded redevelopment project involving railroads. Regardless, a clear takeaway from reviewing Sioux Fall's switch station redevelopment project is the importance of clarity in message, creating stakeholder buy-in, and developing a unified stakeholder vision.

Other redevelopment projects in Sioux Falls have seen a more thorough, integrated, and successful public input process. Sioux Fall's 2004 riverfront redevelopment project is one such example. Following a process similar to the direction outlined for the South Port public participation plan, Sioux Falls began its community engagement with a series of open houses. The first open house was used as a brainstorming session to generate land use ideas. After city staff examined the public input drawn from the open house, design sketches were created and a second design meeting was held for citizens to rate photos of different land uses (Long Range Planning: River Greenway). Next, a land use matrix was constructed to track feasibility, type of land use, and implementation. The top ranked preferences were sent to a technical review committee comprised of community leaders who were consulted by city staff as redevelopment progressed. The persistent public engagement helped build excitement for the project and created an opportunity for issues to be confronted quickly and directly.

Sioux Falls' Present Day Waterfront



Source: Sioux Falls

Wausau took a very encompassing stance on its public participation process for port redevelopment. Citizens were invited to participate in a public forum designed to help brainstorm land uses and goals during the formation of the River Edge Master Plan in 1991. The brainstorming session was followed up by three separate design charrettes. The first charrette targeted local businesses and focused on building a business friendly environment. A second charrette was held for Wausau residents and a final one took place specifically for high school students. The use of multiple charrettes targeting different citizen groups helped ensure a diverse cross section of public input was received, a problem seen in our October 2012 South Port public input session. Next, Wausau hired development organization CDS to use feedback from the charrettes to develop a site plan. CDS's recommendation was then presented to City Council and charrette participants for further feedback. A timeline of Wausau's final steps for

riverfront development is shown in the figure below (Wausau Northeast Riverfront Sustainable Master Plan).

Stoughton also methodically assessed community needs prior to developing a detailed redevelopment plan. A broad redevelopment plan called "The Rail Corridor Redevelopment Plan" was adopted by Stoughton's City Council in 2005 establishing the goal of creating a public/private partnership to redevelop the area into mixed-use space. Specific redevelopment plans were to be contingent upon the results of a housing inventory assessment, a commercial demand analysis, and several public input meetings.

Land use ideas did not come solely from residents. To gauge the feasibility of establishing an artist's district that city officials were anxious to create, Stoughton hired a contractor to survey seventy local and nearby artists about their interest in locating studios in the riverfront district. Other ideas were generated through stakeholder interviews. Stoughton's staff conducted interviews with local landowners asking them a series of questions about their business intentions and perceived strengths and weaknesses of the riverfront area from a commercial perspective. Additionally, developers were interviewed about development feasibility and specific land uses they believed to be viable. Finally, a public input meeting was held to generate further community input.

The South Port Group took lessons from Sioux Fall's challenges and combined successful elements from other plans to create an inclusive public engagement strategy capable of being undertaken and producing actionable results within a year. The public engagement process is discussed in detail later in the report.

Concluding Considerations and Appendices

Wausau Public Engagement Agenda

Continuous Research, Documentation and Brainstorming		Previous Research and Community Input Repeatedly Reviewed. Entire Team Meets Weekly. Close Contact with Client. Attention to Economic and Environmental Impacts of Design to Site and City while Maximizing Appeal to Wide Audience.					
CDS team conducts preliminary research, visits City of Wausau, meets with City officials, documents site and compares individual analysis.	Team creates rough concepts and themes for site. In Wausau receives community input during day of participatory design charrettes with diverse groups.	Documents charrettes, organizes input, and begins brainstorming conceptual designs. Breaks up into north and south sections for further development.	Synthesizes individual and small team efforts into a single document.	CDS team visits Wausau to present preliminary draft version of master plan to City officials. Feedback received for further project development.	Team works to improve images for complete documentation of CDS's visioning for Wausau's Northeast Riverfront.	Final presentation dates set and editing begins for final report.	Preparation of final summary and visioning report. Presentation to City officials, charrette participants, and residents.
MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCT. / NOV.	DECEMBER	JANUARY
2011				2012			

Floodwalls

The South Port's current floodwall presents significant challenges and opportunities to redevelopment. Silt buildup in the Mississippi and evolving weather patterns necessitate the continued use of the John C. Culver floodwall that protects 6.5 miles of Dubuque at a minimum of 29.5 feet (Gehl, March 2011). While it has proven a trustworthy flood mitigation tool, the South Port's concrete floodwall severely restricts public access and the view of the Mississippi. The North Port bike path, built on top of North Port's dirt covered concrete floodwall, is a solution many cities have adopted in an attempt to make the best out of an ugly but necessary flood barrier.

The following section examines cities that successfully incorporated flood mitigation barriers into prosperous downtown areas.

After a series of intense floods in the 1990s Sioux Fall's engineers determined a greenway with ten foot floodwalls was necessary to protect against future floods. City planners then solicited public feedback about the existing riverfront and focused on the public's desire to keep and expand the existing bike path.

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A public survey conducted prior to redevelopment showed the following (Long Range Planning: River Greenway):

- 86% of the public use the current riverfront bike path.
- 94% of the public want the river walk connected to downtown.

Maintaining a sightline to the river is a common problem for cities facing chronic floods. Sioux Falls, and several other cities examined, determined a bike path was the most economically feasible way to maintain public access to the riverfront. Today, Sioux Falls' much loved and heavily used bike path runs the length of the city all the way to Falls Park pictured below. Sioux Falls success suggests connecting Dubuque's own riverfront bike path to the Mines of Spain could be popular.

Sioux Falls Bike Path and Waterfall



Source: City Profile Sioux Falls

Wausau went to great lengths to secure public access along the river when forced to construct a manmade levee along their downtown waterfront. Similar to Sioux Falls, Wausau constructed a walking path along their levee.

Branching out beyond the three primary case studies, Vicksburg demonstrates another technique of incorporating a floodwall into downtown life. Starting in 2008, Vicksburg began beautifying their riverfront by soliciting sponsors to fund the creation of murals on its floodwall seen below. A bike path is still incorporated on the riverfront but it resides directly alongside the riverfront between the floodwall and river.

Vicksburg Floodwall



Source: Iowaeightleys

Concluding Considerations and Appendices

Parkersburg, West Virginia constructed its concrete floodwall one hundred feet back from the waterfront to allow room for floodable green space and a roadway along the riverfront.

Parkersburg, WV Floodwall



Source: Wikipedia, Parkersburg

While the San Antonio River is significantly smaller than the Mississippi, San Antonio's river walk presents an exemplary example of channeling a river into a commercial attraction. The river walk is a possible case study worth further examining if Dubuque wishes to pursue the creation of canals that proved popular in the South Port public input session.

San Antonio River Walk



Source: Paseo del Rio Association

Noise Considerations

Since the South Port is located along major rail, vehicle, and barge transportation lines, noise allowances and mitigation methods used in similar situations are outlined below. Additionally, noise is an especially important concern if Dubuque pursues commercial or residential development per the current 2002 Master Plan.

For at grade crossings, the minimum horn volume for warning devices is 96 dBA (+/- 4dB) per Federal Railroad Administration (FRA) standards (Chapter 5 Environmental Considerations). South Port properties will experience supplemental noise from train switch station activity in addition to Highway 20 overpass noise pollution.

Concluding Considerations and Appendices

Noise barriers are only federally mandated when federal funds are involved per Title 23 of the U.S. Code of Federal Regulations, Part 772. However, Part L; 6-6-10: Housing Standards of Dubuque’s City Code does stipulate (Dubuque City Code):

1. Performance Requirement: The site and neighborhood must be reasonably free from disturbing noises and reverberations and other dangers to the health, safety and general welfare of the occupants.
2. Acceptability Criteria: The site and neighborhood may not be subject to serious adverse environmental conditions, natural or manmade, such as excessive noise, vibrations, or vehicular traffic.

Presently no decibel tests have been undertaken in Dubuque’s South Port but examination of Sioux Fall’s noise studies provides insight into generally accepted standards. Due to federal funding Sioux Falls’ switch station redevelopment will be required to abide by the criteria shown in the table below (East Side Corridor Environmental Assessment). HUD standards are similar with dBA levels above 65 normally considered unacceptable for residential areas.

FHWA Noise Abatement Criteria

Category	L ₁₀ dBA	Land Use
A	60	Special areas requiring serenity
B	70	Residential and recreational areas
C	75	Commercial and industrial uses
D	N/A	Undeveloped areas
E	55*	Residential, hospitals, libraries, etc.*

* Applies to interior noise levels. All other land uses are exterior levels.

Guidelines for residential areas recommend 10-foot or 20-foot high sound barriers if sound reduction of 7 or more dBA’s occurs at a cost of under \$15,000 per house.

Stoughton’s Railroad Corridor redevelopment plan does not include noise pollution tests but they do examine similar environments and found residential buildings near grade crossing experience 80 dBA range. However, in Stoughton’s case, a reduction in long-term noise pollution is actually expected due to negotiated decreases in industrial rail freight on existing tracks. While there is no specific plan to address noise pollution, the City identifies rail traffic as a detriment to future development and requires new construction to mitigate interior noise levels to federal standards of 55 dBA.

Overall, public reception to the installation of sound barriers is usually positive according to the Department of Transportation’s case studies (Noise Barrier Design - Visual Quality). The studies also note ascetics in commercial and residential areas are of increased importance and planting of native foliage or natural sound barriers can be a viable alternative to concrete sound barriers.

Overlay Districts and the Challenges Maintaining a Working Harbor

Given the unique attributes of port areas, cities such as Wausau have moved to create zoning overlay districts to preserve the unique attributes of port areas as well as to provide additional protections of environmentally sensitive riverfront districts. Wausau’s zoning overlay provides additional protection against soil erosion into the river while requiring building setbacks and designs that preserve the view of the surrounding riverfront. City officials in Wausau, and other cities, note that using an

Concluding Considerations and Appendices

overlay as opposed to rezoning is usually more politically feasible. This message is especially salient to Dubuque as it attempts to put recent lawsuits in the South Port in its rearview.

Baltimore also initiated a port area overlay district for different but relevant reasons. The Baltimore Maritime Industrial Zoning Overlay District (MIZOD) was initiated to slow non-industrial growth so as to get a clearer picture of the future type of land use demanded on its riverfront (MIZOD Case Study). The overlay is not designed to stop commercial development, only to restrict development that would hinder current industrial activity. Baltimore's overlay is large-scale and specifically targets the protection of deep water frontage from commercial development that might inhibit industrial freight activity.

Dubuque faces similar water transportation issues on a smaller scale. In the South Port, both Newt Marine and the Coast Guard have expressed concern that increased commercial activity in and around the Ice Harbor may restrict the turnaround ability of their vessels. This makes a zoning overlay designed to protect their ability to operate a potential solution if a working South Port is determined to be in the City's interests.

Existing South Port conditions are unfavorable for businesses that require significant land based transportation into or out of the South Port area. The Iowa Department of Transportation offers a Railroad Revolving Loan and Grant Program to provide financial planning and development assistance for railways servicing port areas. Local governments are eligible for grants up to \$100,000. Applications are scored on existing site information, study goals, and organizational structure and capacity (Office of Rail Transportation). If continuation of a working South Port is identified as a viable option, this

program could help provide the funding to make a successful working port a reality.

Visual Analysis

Because Dubuque's port areas are considered the gateway to Dubuque, a visual analysis of the redevelopment of the area is especially important. Best practices suggest building a photographic database of the area from nearby neighborhoods and anticipated highly trafficked areas within the site area. Visual preference surveys were an essential part to the redevelopment of Sioux Fall's River Walk redevelopment and Wausau's River Edge Master Plan. Residents were encouraged to envision the redevelopment holistically. This included how the site might be viewed from other parts of the city and from spaces within the redevelopment area.

Protecting historical assets can also be important to maintaining the visual integrity of downtown. Historical resources, such as existing buildings, should be examined for structural, economic, and land use value. Local and federal historical societies should be informed of redevelopment intentions and be invited to review existing buildings for historical significance. Building materials, architecture of historical significance, a building's potential for reuse, and whether the building provides important historical context to an area should all be considered prior to demolition. If significant historical structures exist, a preferred redevelopment plan could be created that incorporates existing structures of importance, similar to the plan established in the Port of Bellingham (The Waterfront District Final EIS, p. 12). Reuse of existing structures must meet a threshold for structural integrity and economic viability considering historical tax credits or assistance to qualify for a hold on demolition or renovation.

C: South Port Public Input Session Ideas

- Amtrak Station
- Amusement park
- Baseball field
- Better access to S.P.
- Bike share to connect North Port to downtown
- Brick Buildings Stay
- Build to Increase Tax Base
- Canal
- Children's museum
- Coast Guard Museum
- Condos/Mixed-use
- Dog Park
- Entertainment Venue
- Expand West/Ice Harbor Vehicle Access
- Farmers Market
- Ferris wheel-gateway attraction
- Fill in so all can see the river
- Fishing on pier
- Go-kart/Mini golf
- Historical farm
- Hotels
- Indoor/Outdoor Theater
- Industrial park
- Jones street retail
- Keep working harbor
- Large Boat Dock
- Linear park
- Maintain and beautify working harbor
- More outdoor seating
- Moss pond with bird watching
- Nature reserve
- “Old Main Street”
- Outdoor exercise similar to Venice, CA
- Outdoor Theater
- Outdoor Theater on Barge
- Overpass connection to south port
- Parking under bridge
- Pedestrian connection to historic millwork district
- Piers into water
- Possible restaurant at end of pier
- Railroad Museum
- Reconfigure streets
- Residential canal
- Restaurants Along Waterfront
- Riverfront beach
- Road attached to river
- Rooftop Gardens and Green space
- Sculpture park
- Sept 11th memorial
- Skate park
- Sky cables
- Social area
- Summerfest (festival grounds)
- Tours of working harbor
- Trail to Mines of Spain
- Trees
- Trolley
- Trolley car restaurant
- Walking Path Made Longer
- Walkway Bridge over Floodgate
- Water taxi
- Wisconsin Dells
- World Class Festival Grounds

Concluding Considerations and Appendices

Discussion Guide for the Public Input Session

Guidelines for Discussion

- ◆ Today's focus is oriented towards land use and not design details.
- ◆ Please talk one at a time
- ◆ No wrong or right answers
- ◆ Feel free to make comments/suggestions to other ideas
- ◆ Please help yourself to refreshments and snacks as wanted.

Please keep in mind Dubuque's guiding Sustainability Principles while generating ideas



This event is the first of a series of public input and feedback forums being held to guide the reimagining of Dubuque's South Port.

If you would like to remain up to date about future public engagement opportunities please provide your contact information on the sign in sheet.

Future Events

Mid November 2013: Public Preference Survey Distribution

April-March: Public Feedback Session

Mid May 2013: Final South Port design presentation to Dubuque City Council

Find more info at www.southport.eventbrite.com



Questions about this event or the South Port project?

Please contact The University of Iowa's South Port Team at:

southport@uiowa.edu

Reshape the South Port of Dubuque

Brought to you by:
 Graduate Students from the School of Urban & Regional Planning at The University of Iowa in partnership with the City of Dubuque



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Katey Bangstor
 Charles Lowell
 Sandra Mason
 Joe Ornelas
 Adam Plagge
 Adam Thompson
 Tuya Zorig



Public Input Session Outline

I. Introduction Presentation (15 Minutes)

- ◆ Explanation on why we are here today
- ◆ Main goal for this session
- ◆ History of the Port of Dubuque
- ◆ Development differences between the North Port and the South Port
- ◆ Insight into what other cities have done to redevelop their ports.
- ◆ Ideas generated by Speakers to help with brainstorming

II. Small Group Input Session (1 hour)

III. Short presentation of Small Group ideas to full assembly (15 Minutes)

IV. Poll of presented ideas (On way out)

Questions

1. What activities do you wish you could do in the redeveloped South Port area?
2. What existing South Port attributes should be utilized?
3. How can the South Port portion of the river be better utilized?
4. What is the main reason for coming downtown?
5. What would make you want to visit the South Port?
6. What South Port uses would be compatible with the railroad?
7. How do you think we can make the South Port beautiful?
8. What should the main theme be in the South Port?
9. What are the biggest barriers for people using the South Port?
10. Should the South Port be developed like the North Port?
11. If you could decide, what should the South Port be?
12. What attractions would you like to see in the South Port?

Historical View of Dubuque's Port



Current South Port Flood Wall



Current South Port View



Current South Port Entrance over rail tracks



D: Survey Statistical Analysis

Summary Tables

Question 3: *Please rank the level of importance of the following. (View of river, river access, employment opportunities, recreational opportunities, aesthetic appeal)*

Question (n=372)	Not Important	Somewhat Important	No Opinion	Important	Highly Important	Mean
View of the River	3.23%	6.72%	2.42%	36.29%	51.34%	4.26
Physical Access to the River	6.72%	14.25%	8.60%	35.75%	34.68%	3.77
Employment Opportunities	7.80%	15.86%	13.44%	43.01%	19.89%	3.51
Recreational Opportunities	4.57%	8.33%	4.30%	43.01%	39.78%	4.05

Question 4: *What main use would you prefer for the redevelopment of the South Port? (Rank from 1 being the most preferred to 5 being the least preferred)*

Question (n=372)	1st Preference	2nd	3rd	4th	Least Preferred	Mean
Recreational Development	51.61%	26.34%	9.41%	8.60%	4.03%	1.87
Environmental Restoration	23.92%	32.53%	20.70%	15.86%	6.99%	2.49
Commercial Development	9.68%	25.27%	36.02%	24.19%	4.84%	2.89
Industrial Development	8.70%	7.34%	6.79%	22.83%	54.35%	4.07
Residential Development	6.27%	8.72%	27.52%	28.07%	29.43%	3.66

Concluding Considerations and Appendices

Question 6: *If you are interested in other outdoor recreation in the South Port, which features would you like to see? (Rank with 1 being undesirable and 10 being highly desirable)*

Question	1 (Undesirable)	2	3 (Neutral)	4	5 (Highly Desirable)	Mean	n
Festival Grounds	14.04%	6.02%	18.91%	34.67%	26.36%	3.5	349
Amphitheater/Outdoor Theater	10.83%	7.69%	19.09%	34.19%	28.21%	3.6	351
Youth Recreation	18.97%	12.93%	21.26%	21.26%	25.57%	3.2	348
Farmers Market	9.88%	10.47%	24.71%	32.27%	22.67%	3.5	344
Gateway Type Attraction	20.12%	13.12%	23.03%	26.82%	16.91%	3.1	343
Walking/Biking Trail	3.71%	2.57%	11.71%	34.57%	47.43%	4.2	350
Dog Park	39.47%	13.74%	19.59%	16.67%	10.53%	2.5	342
Sculpture/Art Park	18.71%	15.50%	28.36%	25.44%	11.99%	3.0	342
Other, please specify	28.57%	2.04%	22.45%	2.04%	44.90%	3.3	49

Question 7: *If you are interested in commercial development, what would you like to see? (Rank with 1 being undesirable and 5 being highly desirable)*

Question	1 (Undesirable)	2	3 (Neutral)	4	5 (Highly Desirable)	Mean	n
Local, small, Main Street feel	14.33%	5.79%	19.51%	32.01%	28.35%	3.54	328
Tourism related business	18.79%	13.33%	22.12%	25.76%	20.00%	3.15	330
Office Space	44.79%	22.70%	25.15%	6.44%	0.92%	1.96	326
Entertainment	12.99%	8.46%	18.13%	38.07%	22.36%	3.48	331
Other, please specify	28.38%	0.00%	12.16%	4.05%	55.41%	3.58	74
National retailers/big box stores	56.27%	16.82%	14.68%	7.65%	4.59%	1.87	327

Concluding Considerations and Appendices

Question 8: *If you are interested in residential development, which types of housing would you like? (Rank with 1 being undesirable and 5 being highly desirable)*

Question	1 (Undesirable)	2	3 (Neutral)	4	5 (Highly Desirable)	Mean	n
Multi-Family High Rise	56.14%	8.07%	16.84%	10.53%	8.42%	2.07	285
Multi-Family Townhouses	47.52%	9.22%	14.89%	20.21%	8.16%	2.32	282
Other Housing Mix	65.00%	3.00%	15.00%	1.00%	16.00%	2	100
Public Housing	78.65%	7.47%	9.25%	3.56%	1.07%	1.41	281
Single Family	60.36%	10.71%	16.07%	9.64%	3.21%	1.85	280
Mixed-Use	34.04%	9.12%	17.19%	19.65%	20.00%	2.82	285

Question 9: *If you are interested in museums, what would you like to see in the South Port? (1 being undesirable and 5 being highly desirable)*

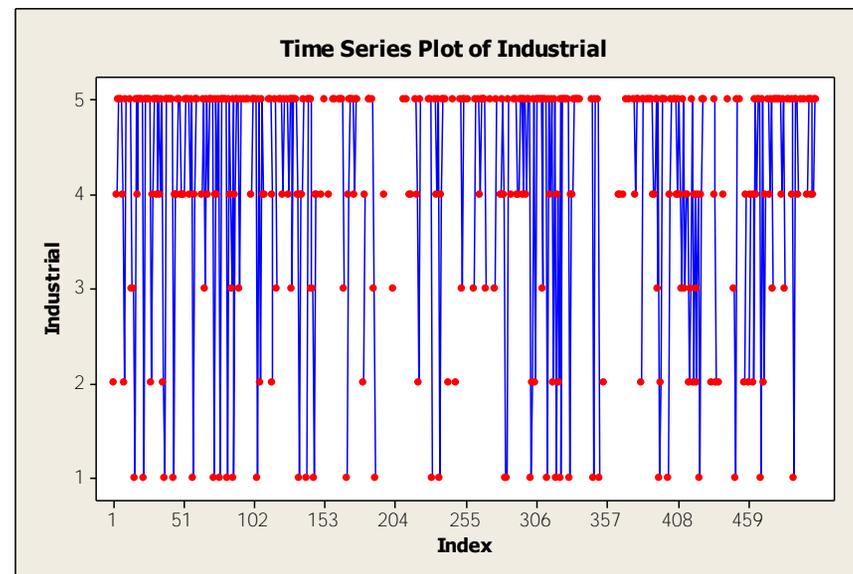
Question	1 (Undesirable)	2	3 (Neutral)	4	5 (Highly Desirable)	Mean	n
Coast Guard Museum	13.90%	8.47%	32.20%	26.44%	18.98%	3.28	295
Historical Farm/Industry Museum	20.42%	9.86%	29.23%	29.93%	10.56%	3	284
Railroad Museum	10.54%	5.44%	22.79%	32.65%	28.57%	3.63	294
Memorial	23.21%	8.93%	39.29%	20.00%	8.57%	2.82	280
Other, please specify	47.46%	0.00%	20.34%	11.86%	20.34%	2.58	59

Concluding Considerations and Appendices

Question 10: *If you are interested in water related activities, what redevelopment element would you like? (1 being undesirable and 5 being highly desirable)*

Question	1 (Undesirable)	2	3 (Neutral)	4	5 (Highly Desirable)	Mean	n
Fishing Pier	6.18%	4.12%	22.94%	41.18%	25.59%	3.76	340
Swimming Pool	26.97%	14.85%	27.58%	19.09%	11.52%	2.73	330
Boat Docks	13.81%	8.71%	27.93%	31.23%	18.32%	3.32	333
Piers for Walking/Entertainment	3.78%	2.33%	4.94%	33.72%	55.23%	4.34	344
Public Canals Through South Port	12.28%	5.69%	28.44%	23.95%	29.64%	3.53	334
Other, please specify	27.27%	0.00%	16.36%	1.82%	54.55%	3.56	55

The following is an example of a visual time series analysis done on the responses for preferences for Industrial Use as the primary land use in South Port. The Y axis lists preference while the X axis represents responses on a linear timeline. As you can see the number of survey respondents ranking industrial use as one of their top two preferences (1 or 2) stays relatively static for the duration of the survey.



The following is an example of a relatively representative response statistics for Question 4.

Concluding Considerations and Appendices

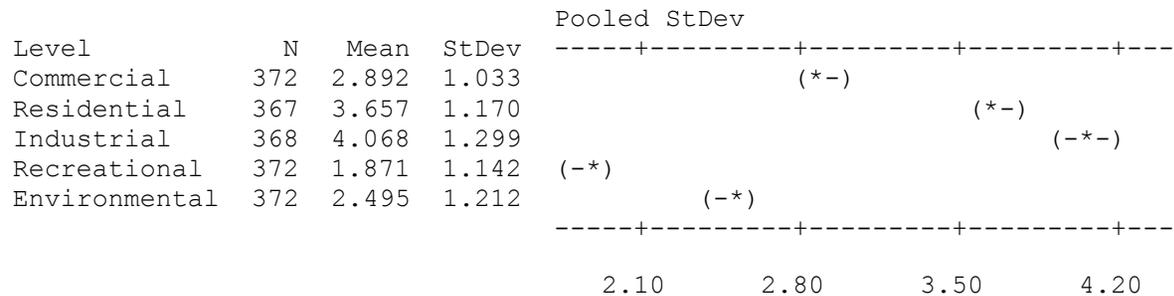
Results for: Worksheet 2 main land use

One-way ANOVA: Commercial, Residential, Industrial, Recreational, Environmental

Source	DF	SS	MS	F	P
Factor	4	1151.36	287.84	208.82	0.000
Error	1846	2544.54	1.38		
Total	1850	3695.89			

S = 1.174 R-Sq = 31.15% R-Sq(adj) = 31.00%

Individual 95% CIs For Mean Based on



Pooled StDev = 1.174

One-Sample T: Recreational

Variable	N	Mean	StDev	SE Mean	95% CI
Recreational	372	1.8710	1.1420	0.0592	(1.7545, 1.9874)

One-Sample T: Commercial

Variable	N	Mean	StDev	SE Mean	95% CI
Commercial	372	2.8925	1.0328	0.0535	(2.7872, 2.9978)

One-Sample T: Industrial

Variable	N	Mean	StDev	SE Mean	95% CI
Industrial	368	4.0679	1.2990	0.0677	(3.9348, 4.2011)

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One-Sample T: Recreational

Variable	N	Mean	StDev	SE Mean	95% CI
Recreational	372	1.8710	1.1420	0.0592	(1.7545, 1.9874)

One-Sample T: Environmental

Variable	N	Mean	StDev	SE Mean	95% CI
Environmental	372	2.4946	1.2120	0.0628	(2.3711, 2.6182)

Two-Sample T-Test and CI: Commercial, Residential

Two-sample T for Commercial vs Residential

	N	Mean	StDev	SE Mean
Commercial	372	2.89	1.03	0.054
Residential	367	3.66	1.17	0.061

Difference = mu (Commercial) - mu (Residential)

Estimate for difference: -0.7642

95% CI for difference: (-0.9236, -0.6048)

T-Test of difference = 0 (vs not =): T-Value = -9.41 P-Value = 0.000 DF = 729

Two-Sample T-Test and CI: Recreational, Environmental

Two-sample T for Recreational vs Environmental

	N	Mean	StDev	SE Mean
Recreational	372	1.87	1.14	0.059
Environmental	372	2.49	1.21	0.063

Difference = mu (Recreational) - mu (Environmental)

Estimate for difference: -0.6237

99% upper bound for difference: -0.4224

T-Test of difference = 0 (vs <): T-Value = -7.22 P-Value = 0.000 DF = 739

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Two-Sample T-Test and CI: Recreational, Commercial

Two-sample T for Recreational vs Commercial

	N	Mean	StDev	SE Mean
Recreational	372	1.87	1.14	0.059
Commercial	372	2.89	1.03	0.054

Difference = mu (Recreational) - mu (Commercial)

Estimate for difference: -1.0215

99% upper bound for difference: -0.8354

T-Test of difference = 0 (vs <): T-Value = -12.80 P-Value = 0.000 DF = 734

Concluding Considerations and Appendices

E: South Port Parcel Owners and Values

Parcel Number	Location on Map	Owner Name	Address/Description	Class	Size (acre)	Assessed Value			Status				
						Land	Property	Gross	Vacant	Building	Railroad	Unknown	
1025501006	A2	Chicago Central & Pacific Railroad Co.		N/A							1.0		
1130501007	C2		Dub Har Co Add Lot 1 Blk 9	N/A							1.0		
1130501008	C6			N/A							1.0		
1130501009	D1			N/A							1.0		
1130501009	E1			N/A							1.0		
1130501011	E3		Lots 2-1,2-2,2-3,2-4,2-5 Blk 27	N/A							1.0		
1131501001	E4		D & P R R	N/A	0.4	820.0	0.0	820.0				1.0	
1130501014	F2		Lot 2 of E 1/2 Blk 19 etc.	N/A								1.0	
1130501015	F3		Lots A-1-1, 2-1,2-2,2-11 and 2 all in Blk 28	N/A								1.0	
1131501001	F4		D & P R R	C	0.4	820.0	0.0	820.0					1.0
Subtotal					4.590								
1130156001	B1	City of Dubuque	Pt Levee lying E of Terminal St & S of Ice Harbor	E				10400.0				1.0	
1130302002	C4		Lot 1 Chemical Sub (Leased to Dubuque River Terminals)	C	2.1	0.0	14990.0	14990.0					1.0
1130304003	B4		Pt of NW SW Levee lying E of Terminal St (River Property leased to Dubuque Terminals.)	E	1.3				67000.0				1.0
1130304001	B5		Pt NW SW Levee lying E of Terminal St	E					96900.0				1.0
1130306003	D4		W of River and N of Lot 1 of D & P Rail Road Ground & Part of Levee	E					56970.0				1.0
1130306003	D6		W of River and N of Lot 1 of D & P Rail Road Ground & Part of Levee	E					56970.0				1.0
1130352001	E2		Lot 1-1,1-2,1-3,1-4,1-5 & All in Blk 27 & lots 3, 4, 4A, Blk 17	E	1.3					1.0			
Subtotal					16.96								
1130302001	C3	D R B E Properties LLC	30 Jones	C	1.4	51920.0	329050.0	380970.0		1.0			
Subtotal					1.29								
1130155002	A4	Dubuque Terminals Inc.	Jones	C	2.5	64670.0	431770.0	496440.0		1.0			
1130301002	B3		5 Jones	C	0.1	5410.0	115260.0	120670.0		1.0			
Subtotal					2.93								

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Parcel Number	Location on Map	Owner Name	Address/Description	Class	Size (acre)	Assessed Value			Status			
						Land	Property	Gross	Vacant	Building	Railroad	Unknown
1130303004	C5	Gary W & Karen M Newt	85 Terminal	C	1.2	61200.0	68240.0	129440.0		1.0		
1130301001	B2	Gary W. Newt	100 E 1st St	C	0.5	69770.0	86500.0	156270.0		1.0		
Subtotal					1.74							
1130155001	A3	Molo Oil Company	45 Jones	I	1.2	44400.0	12700.0	57100.0				1.0
Subtotal					1.16							
1025430001	C1	State of Iowa DOT	E 1/2 Blk 10 Dubuque Harbor	E				17790.0				1.0
1130306002	D3		W of River and N of Railroad & Part of Levee / Dubuque harbor company'S ADD	E				32700.0				1.0
1130354003	F1		Lots 3-2 & 3-1-1 Blk 28/PT OF NW SW (LEVEE) LYING E OF TERMINAL ST, N OF JUL DUB BRID & W OF RIVER	E		0.0	0.0	23990.0				1.0
Subtotal					1.27							
1130305013	D2	Sunflower Enterprises LLC	5 Jones	C	1.6	85370.0	0.0	85370.0	1.0			
1130305010	D5		115 Terminal	C	0.6	29580.0	124030.0	153610.0		1.0		
Subtotal					2.13							
1025291001	A1	USA/Cooper, A.A., Wagon Workers Block	E 1st St	E		0.0	0.0	81750.0				1.0
Subtotal					0.93							
TOTAL					33	\$413,960	\$1,182,540	\$2,040,970	2	6	9	12

Source: City of Dubuque, 2012

F: 2002 Port Master Plan Design Standards Overview

In March 2002 the Ice Harbor Urban Renewal District Plan was adopted to set design standards for redevelopment in the Port of Dubuque. These same design standards are recommended for implementation of the South Port designs. The design standards require a design review before being approved. A detailed listing of all the design standards can be found on the City of Dubuque website.

Certain design standards are required for approval and include:

- ***Newly constructed buildings***
 - Must be at least 605.5 feet in above elevation.
 - Must be of similar style, scale, height, architectural style, building material, setbacks, colors, and cornice lines of traditional buildings found in the adjacent downtown area.

- ***Ground Flood Uses***
 - 60% of ground flood area in buildings built that face both Bell Street and 5th Street must be used as either retail, entertainment space, business services, commercial, or used as a restaurant.

- ***Summary of Building Guidelines***
 - Set-backs for new buildings are to be 10-15 feet in depth.
 - Set-backs for residential buildings are to be 10-20 feet in depth.
 - Height allowances of buildings are to be determined by distance to the waterfront.
 - Buildings adjacent to the waterfront may be no more than 3 stories.
 - Buildings not adjacent to the waterfront may vary between 2 to no more than 10 stories.
 - Freestanding buildings not adjacent to the waterfront may vary between 1 to 2 stories.

- ***Summary of Design Guidelines***
 - New roofs should be flat and equipment on the roof should be screened.
 - Building width, façade transparency, entries to buildings, and balconies & terraces all have their own guidelines.
 - Building materials must be long-lasting and no more than 20% may be EFIS or stucco.
 - Franchises must adhere to the design standards to open their franchise in the port.
 - For additional details on public realm guidelines refer to the 2002 Port of Dubuque Master Plan and the Ice Harbor Renewal District Plan.

G: Iowa Initiative for Sustainable Communities

In partnership with the University of Iowa School of Urban and Regional Planning, the City of Dubuque agreed to prepare projects which will enhance local capacity and help Dubuque develop its sustainability mission not only at the city level but also, at the regional level. Graduate students delivered several reports for the City by working collaboratively with local experts.

During the 2012-2013 school years, Graduate students with The University of Iowa worked on the following projects for the Dubuque area, determined by local leaders:

- Dubuque County Smart Planning Indicators
- Determination of real housing need with special attention to residential as well as commercial development in the Washington Neighborhood
- Accelerating sustainable transportation planning through the use of "smart" data
- Schools, neighborhoods and student outcomes
- Survey of best practices for general plans for redevelopment of port areas and the South Port of Dubuque

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