3. *Economic Development and Sustainability*: Freight development will promote freight along the river corridor, and provide for global economic connections.

Present and future transportation systems will need to address congestion, environmental impacts and continued economic development. The nation's waterways can play a significant role in balancing the congestion in the transportation is environmentally friendly.

The Missouri River Freight Corridor's Task 2 Inventory Report and Site Visit Report is part of the foundation of base information upon which the Missouri River Freight Corridor Assessment & Freight Development Plan was developed.

Table 5.2 lists the public and private port facilities for the portion of the Missouri River shown in Section 2.3. The inventory was derived from GIS data, U.S. Army Corps data, navigational charts, Inland River Guide, previous studies, interviews and site visits. A preliminary evaluation of each facility's infrastructure was conducted for a number of the facilities to ascertain its apparent suitability and sufficiency to facilitate and support freight growth strategies.

Condition Number	No. of Facilities (Active & Inactive)
1	27
2	7
3	10
4	4
5	4
6	27

Note: Condition assessment categories are defined in Section 2.1.2.

Cargo Handling	No. of Facilities (Active Only)
Petroleum & Petroleum Products	2
Manufactured Goods	1
Chemicals	5
Crude Materials	21
Food & Farm	3
Manufactured Equipment	1

Table 5.2 - Facility Information

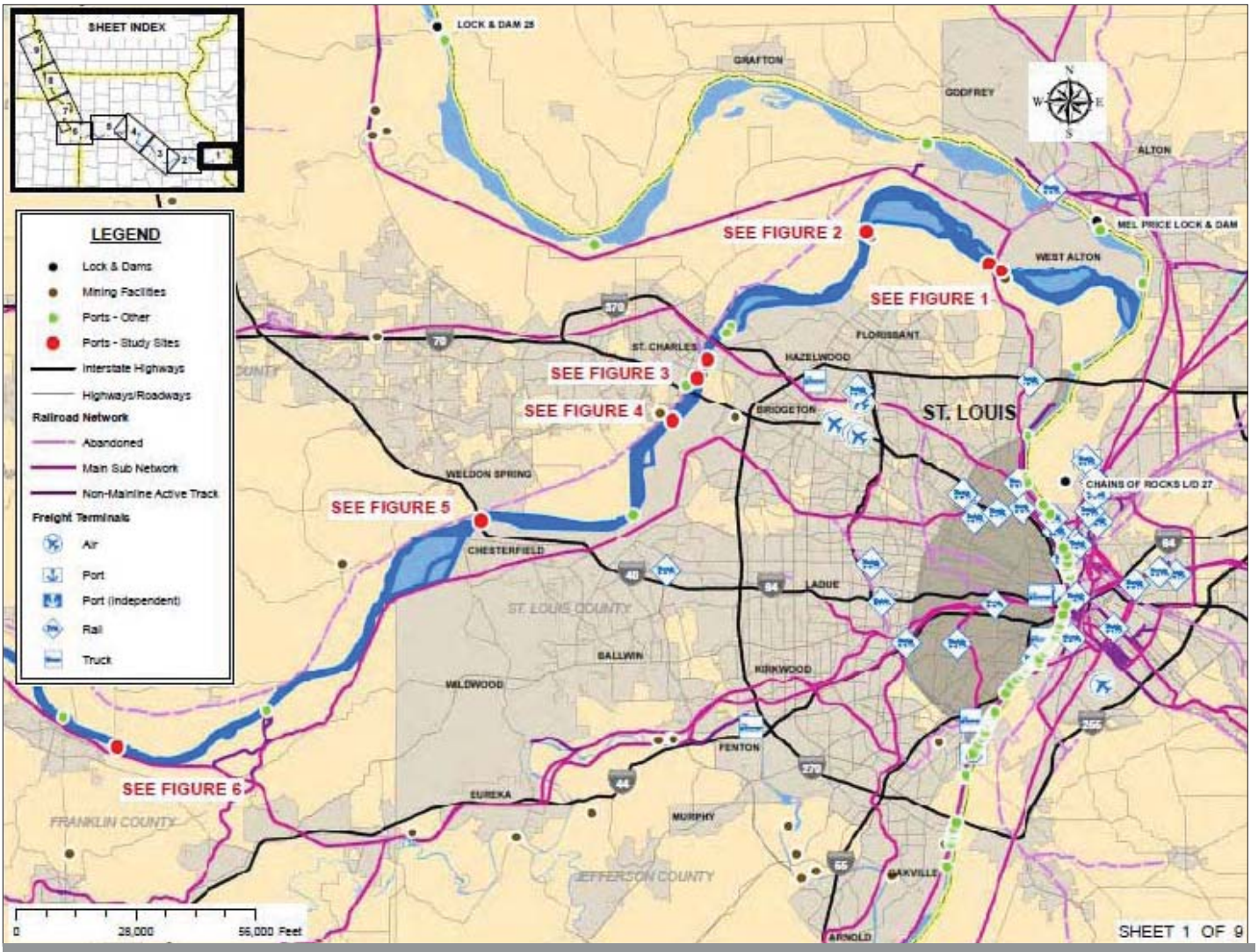


Figure 5.18- Missouri River Freight Corridor Assessment

Of the 29 active facilities, 17 receive sand as their primary cargo. Eight of the remaining 12 active facilities are special purpose facilities built to move a specific commodity, while four have the capability to handle more than one cargo. Only two fleeting areas and one fueling service were present amongst the active facilities.

Improved freight operations along the Missouri River may have a regional benefit to St. Louis and a local benefit to the MRT. If the Missouri River's navigation season was able to be lengthened with greater reliability for shippers, this could influence the amount and types of commodities that flow from the Missouri River and connect to the Mississippi River.

C. RCGA REGIONAL CLUSTER ANALYSIS

The RCGA Regional Cluster Analysis is a strategic plan to better leverage existing resources for St. Louis to emerge from the current economic conditions as a successful metropolitan region. Its primary vision statement is:

By 2020, Greater St. Louis will be consistently ranked among the top 10 of the 20 largest U.S. metropolitan areas in indicators of regional vitality, economic health and the creation of community wealth.

To achieve this vision, the strategic plan is organized into five key priority areas.

1. Support and grow key industry sectors
2. Target marketing and business recruitment in competitive fields
3. Increase rate of start-up ventures
4. Address regional talent as a strategic imperative
5. Leverage all regional transportation assets

All five of these key priority areas will play a key role in the future successes of the NRCC.

The RCGA's key priority areas are consistent with the NRCC's vision and goals. This provides a synergy where the NRCC can help the RCGA achieve their regional goals because the NRCC has strengths and opportunities that can be utilized at a regional level, especially if the region decided to form a freight-focused economic development organization.

D. RCGA GLOBAL FREIGHT HUB

The RCGA is currently exploring the opportunities associated with a global freight hub in St. Louis. In April 2011, a presentation was made to RCGA summarizing a study performed. The full study was not available at the time this was written. Below is a summary of the executive summary presentation.

Logistics Trends

- In- and out-bound freight are 50 to 60 percent of costs
- Fuel price risks
- Truck driver constraints
- Asian (not just china) elongated supply chains
- Security (Sarbanes Oxley)
- Port congestion – Crane / Berth Capacity
- Popular hubs – port diversification:
  - Southern California: ports of LA and Long Beach, nation's busiest.
  - Chicago: inter-modal, Prince Rupert port diversification strategy.
  - Dallas, Mexico and Latin America.
  - Atlanta: Rail hub ("Terminal") closest population center to ports to Charleston and Savannah.
  - Indianapolis and Memphis: No inventory tax.
  - Marine Highway: inland water ports starting to see a lot of attention.

The Promise of St. Louis

The intent of the "Big Idea" was to position St. Louis as the primary platform from which China engages the central region of the U.S. The Lambert-St. Louis international features

- Convenient location
- Adjacent development sites
- Recently expanded Foreign Trade Zone

Mid-America Airport in Mascoutah, IL offers additional capacity and unique capabilities (e.g. 3,500 acre FTZ) As this concept has matured it increasingly has been viewed as a vehicle to leverage all the location and transportation advantages of the St. Louis bi-state region.

The New Big Idea

The Evolving Concept: Global Multi-Modal Logistics Center leveraging the transportation advantages of the St. Louis Business Economic Area and the development of industrial property at Lambert-St. Louis Airport and the immediate surrounding area and region. Defined as "the hub of a specific area where all the activities relating to transport, logistics and goods distribution are carried out by various operators.

Objective: the consolidation and regionalization of freight flows by transportation and logistics operators to reduce costs, increase productivity and leverage both economies of scale and capabilities.

Key St. Louis Freight Facts

- St. Louis is the sixth largest wholesale trade area not located near an ocean port or international border crossing.
- St. Louis ranks high among possible central locations for the distribution and logistics industry.
- Wholesale trade occupations in St. Louis are growing 3.2 times faster than the overall growth rate for all area jobs
- Mapping of the existing distribution centers reveals an existing high concentration and industry cluster in the metro area.
- Largest volume of inbound inter-modal containers to St. Louis come from Los Angeles, San Antonio and New York. Top four commodities are motor vehicle parts detergents, semi-trailers returned empty and paper.

- Largest volume of outbound inter-modal containers to St. Louis go to Los Angeles, New York, San Francisco and San Antonio. Top 4 commodities are motor vehicle parts detergents, metal scrap and flavoring extracts.
- Largest volume of inbound air cargo to St. Louis come from Louisville, Memphis and Indianapolis. Top three commodities are drugs, motor vehicle parts and mail.
- Largest volume of inbound air cargo to St. Louis come from Louisville, Memphis and Indianapolis. Top three commodities are drugs, motor vehicle parts and mail.
- Largest volume of outbound air cargo from St. Louis also go to Louisville, Memphis and Indianapolis. Top four commodities include printed paper, motor vehicle parts, paper and mail.

Opportunities for St. Louis

- St. Louis is equipped with transportation capabilities that equate to a Global Multi-Modal Logistics Center for both domestic and international freight movement.
- St. Louis is the third largest inland water port in the United States
- St. Louis is the third largest rail center in the United States. These assets should be heavily promoted.
- Distribution networks requiring one or three plus warehouses are ideal for St. Louis and an ideal prospecting target.

Air Cargo

Air cargo commodities tend to be:

- High density-value
- Time sensitive items
- Low weight, and
- Items that cannot withstand marine transportation

Apparel is the leading imported air cargo commodity followed by computer equipment, audio and video media, textiles, footwear, science and medical instruments, pharmaceuticals and electronic components.

Fresh beef and pork exports to China via air are expected to enjoy exceptional growth – to deliver fresh product to the expanding Chinese middle class market.

Lessons Learned for St. Louis

Successful multi-modal industrial developments contain the following:

- Public private partnerships.
- Strong local infrastructure with many modes of transportation present.
- Access to significant markets.
- Ability to be an inland aggregation port or logistics center.
- Strong ties to international trade through rail inter-modal and/or dedicated air cargo airports and water ports. On site access to inter-modal rail is dominant.
- On site access to FTZ and custom services.
- Industry target cost reducing incentives.
- On-site services, recruiting, training, maintenance, etc.

The NRCC provides many of the strengths and opportunities necessary to be part of a St. Louis global freight hub. The NRCC could be an urban laboratory to create a global freight hub that has spokes out to other regional resources.

E. I-70 DEDICATED TRUCK LANE O-D STUDY AND ST LOUIS TRUCK LANE CORRIDOR STUDY

The I-70 EIS conducted by MoDOT and the four-state I-70 Dedicated Truck Lanes Feasibility Study conducted for the U.S. Department of Transportations' Corridors of the Future program have identified the need for dedicated truck lanes through the St. Louis region, either on the I-70 corridor or another major parallel east-west roadway corridor, such as I-270, Route 370, etc. to serve heavy truck traffic movements across the I-70 corridor between Kansas City, Missouri and the Ohio-West Virginia border. (I-70 St. Louis Truck Lane Corridor Study and I-70 Dedicated Truck Lanes Feasibility Study)

I-70 Dedicated Truck Lane O-D Study

The purpose of the study was to perform an origin-destination study within the St. Louis metropolitan area in order to gather travel data to determine how trucks are flowing through and within the metropolitan area. The origin-destination study was divided into an external intercept survey and an internal survey. A commercial vehicle external intercept survey was conducted in the field at weigh stations, fueling stations and rest areas to determine the trip purpose, origins and destinations of trucks traveling to and through the metropolitan area. The external surveys were designed to answer the following types of questions:

- Where are commercial vehicle origins and destinations?
- What are the key routes commercial vehicles are using within the metropolitan area?
- What types of cargo are they carrying?
- What are some of the key trip, vehicle and driver characteristics to better understand how trucks circulate?
- How do they feel about the truck-only lanes concept, the use of longer-combination vehicles and potential transportation funding mechanisms?

Figure 5.19 shows locations of the external surveys. A summary of the overall results of the survey is provided on the following pages.

Figure 5.19 - St. Louis O-D Truck Survey External Survey Locations

Highway (State)	Station #	Total 24-Hour Two-Way Truck Traffic Count
I-70 West (Missouri)	1	10,105
US-61 North (Missouri)	2	3,277
I-70 East (Illinois)	3	8,525
I-55 North (Illinois)	4	7,050
I-64 East (Illinois)	5	7,950
I-55 South (Missouri)	6	10,503
I-44 Southwest (Missouri)	7	13,882
Total		**61,292**

Table 5.3- Total Commercial Vehicle Traffic Entering/Exiting the Region by Location

Total Traffic Volume Entering the Region

On a typical weekday, 61,292 commercial vehicles enter and exit the St. Louis metropolitan area on the seven freeways that were included in the study. *Table 5.3* (left) shows the total number of vehicles that entered the region on each freeway.

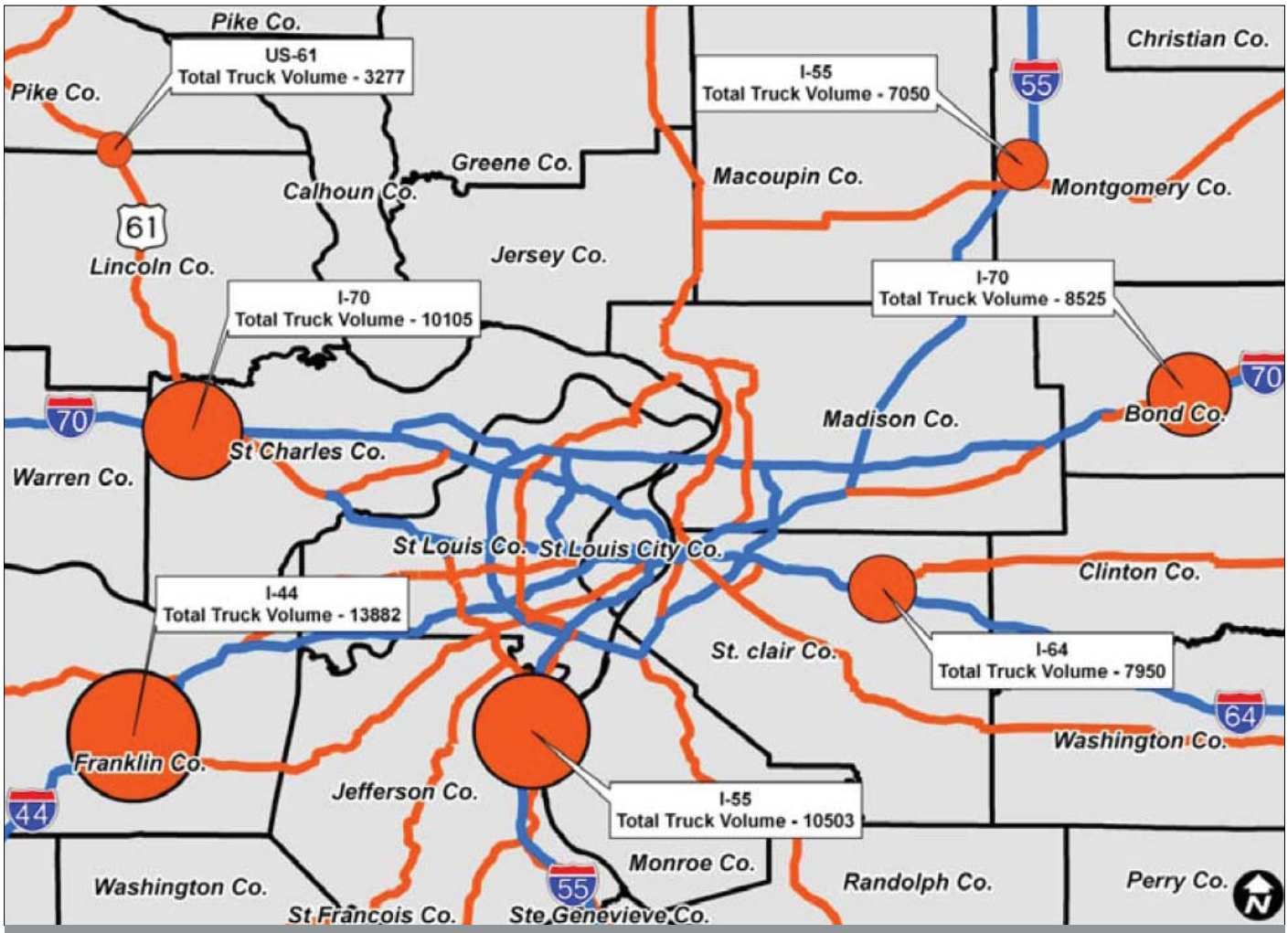


Figure 5.20 - Total Commercial Vehicle Traffic Entering/Exiting the Region by Survey Location

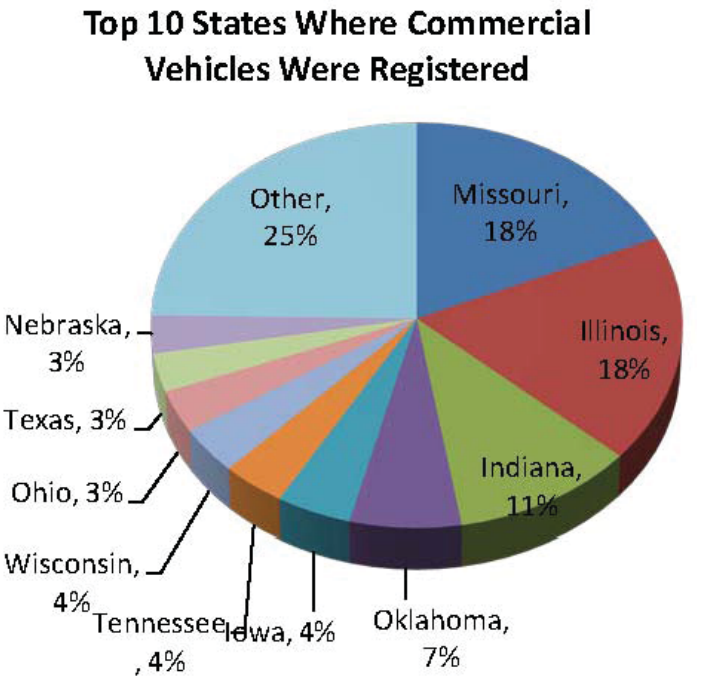


Figure 5.21 - Top Ten States Where Commercial Vehicles Were Registered

The circles on *Figure 5.20* (above) show the number of commercial vehicles that entered and exited the region on each freeway. The size of the circle corresponds to the number of commercial vehicles that entered the region at each station.

Where Vehicles Were Registered

Commercial vehicles from 41 states and Canada were surveyed. Approximately one-third (36 percent) of the commercial vehicles surveyed were registered in Missouri or Illinois. Eighteen percent were registered in Missouri; 18 percent were registered in Illinois; 11 percent were registered in Indiana and seven percent were registered in Oklahoma. *Figure 5.21* (left) shows the top ten states were commercial vehicles were registered.

Type of Cargo Transported
The top five types of cargo that were being transported by the commercial vehicles that were surveyed are listed below:

- Grains, Food, Drink, and Tobacco (29 percent)
- Furniture & Miscellaneous Products (19 percent)
- Metal products and machinery (14 percent)
- Petroleum and Chemical Products (8 percent)
- Electronics and vehicles (6 percent)

Vehicle Occupancy
Ninety-one percent of the commercial vehicles surveyed were occupied by only one person; just nine percent had two or more occupants. Most of these were team drivers, where one drives while the other driver rests; and then the drivers switch at key points along the route.

External Trip Ends
Of the 61,292 commercial vehicles that passed through the seven survey stations, 97,272 external trip ends were recorded. This is because some of the commercial vehicles recorded two external trip ends (if they were through trips without an origin or destination in the St. Louis area).

Fifteen percent of the 97,272 external trip ends were in Southeast Missouri and eleven percent were from the Chicago area (District 1 in Illinois). Nearly 60 percent of the external trip ends were outside Illinois and Missouri. The top ten external trip ends where vehicles traveling through the St. Louis area begin or end their trip are shown in *Figure 5.22* (right).

Approximately 60 percent of the commercial vehicles surveyed were just passing through the St. Louis area en route to other destinations. *Table 5.4* (below) shows the number of through trips that traveled between each pair of destinations in both directions. For example, approximately 2,158 vehicles travel between I-70 in Missouri and I-70 in Illinois each day. Because this study surveyed vehicles both entering and exiting the St. Louis region, the directionality of these 2,158 trips could not be estimated within the desired confidence interval, although one might assume that approximately half of the 2,158 would be traveling in each direction. However, further data would need to be collected to confirm this. This survey collected both entering and exiting traffic due to the configuration and location of the available weigh stations, fueling stations and rest areas. The benefit of collecting data from both entering and exiting vehicles is that if travel patterns differ between the two types, then this study captures the characteristics of both types of travel. Of the commercial vehicles that passed through the region, approximately 35 percent entered or exited the metropolitan area on I-70.

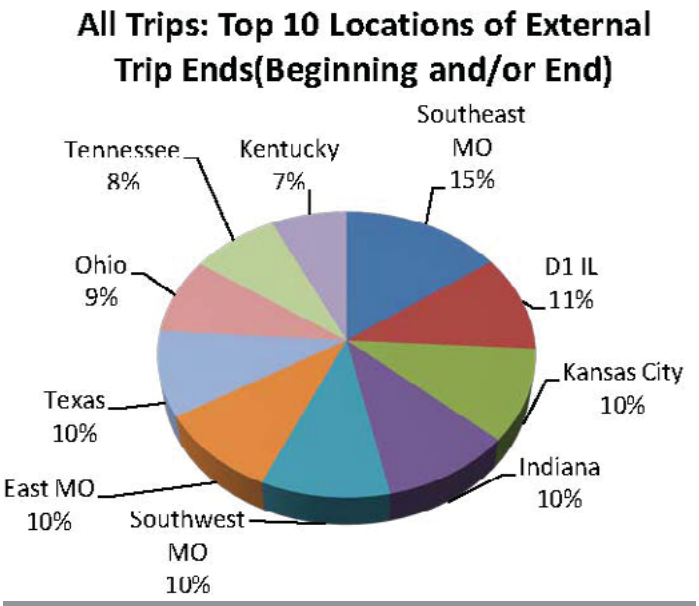


Figure 5.22 - Top Ten Locations of External Trip Ends

Station Entry/Exit	I-70 MO	US-61 MO	I-70 IL	I-55 IL	I-64 IL	I-55 MO	I-44 MO	Total	% of All Through Trips
I-70 MO	0	138	2,158	448	2,525	753	75	**6,096**	17%
US-61 MO	138	0	57	14	473	790	91	**1,562**	4%
I-70 IL	2,158	57	0	54	60	219	3,733	**6,279**	18%
I-55 IL	448	14	54	0	193	1,949	2,798	**5,456**	15%
I-64 IL	2,525	473	60	193	0	214	727	**4,191**	12%
I-55 MO	753	790	219	1,949	214	0	256	**4,181**	12%
I-44 MO	75	91	3,733	2,798	727	256	0	**7,679**	22%
Total	**6,096**	**1,562**	**6,279**	**5,456**	**4,191**	**4,181**	**7,679**	**35,441**	100%
% of All Through Trips	17%	4%	18%	15%	12%	12%	22%	100%	

Table 5.4- Through Trip Two-Way Trip Pairs

Local Origins and Destinations for Commercial Vehicles Traveling on Freeways in the Region

The brown circles on *Figure 5.23* (below) show internal trip ends for commercial vehicles making local deliveries in the St. Louis area. Zone 15 in St. Louis, Missouri was the top destination in the region with 2,382 trips. Zone 39 in East St. Louis, Illinois was the second most frequently visited zone with 1,719. The numbers on the map represent zone numbers.

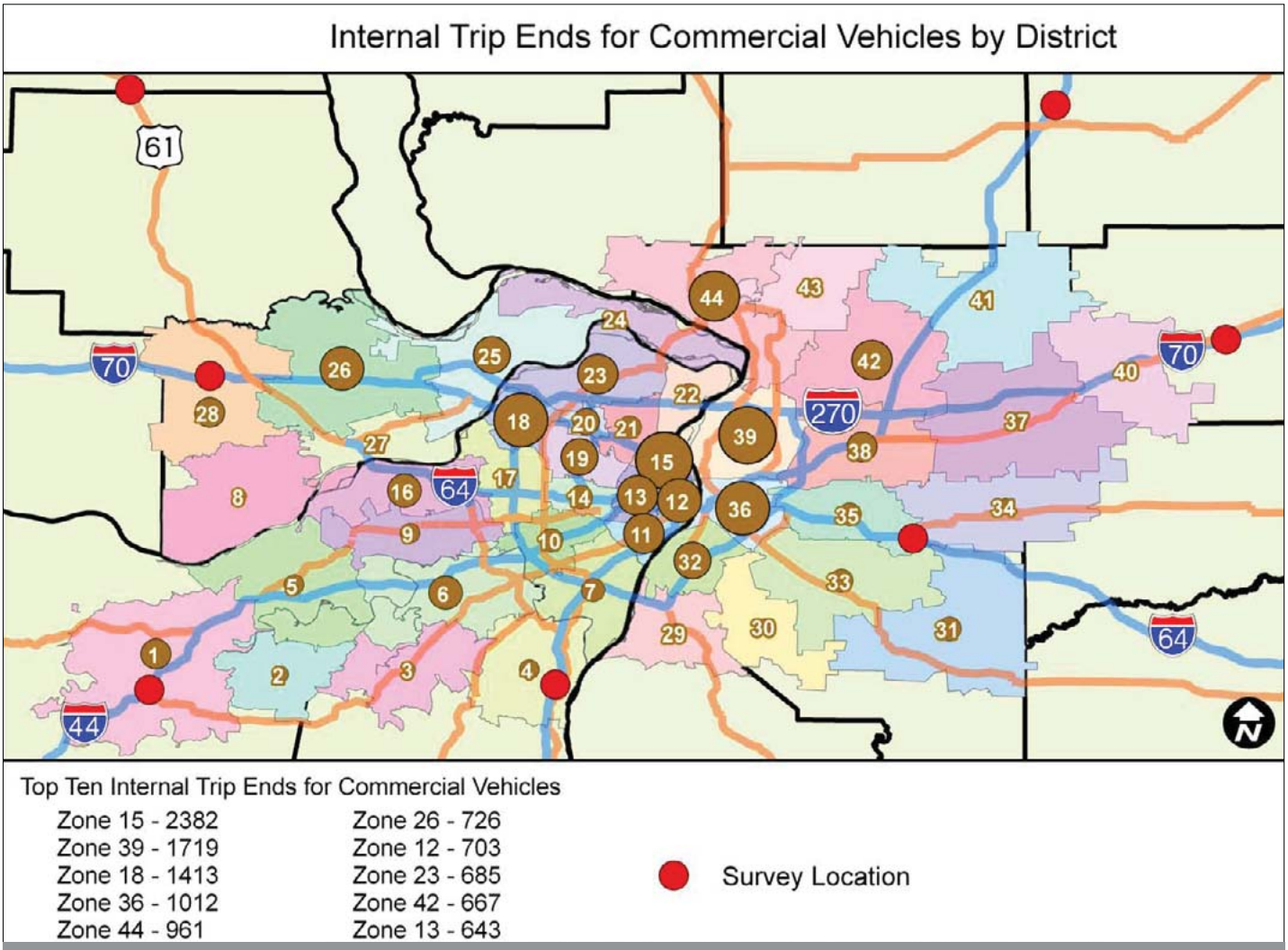


Figure 5.23 - Internal Trip Ends for Commercial Vehicles

All Origins and Destinations for Commercial Vehicles Traveling on Freeways in the Region

Figure 5.24 and *5.25* show origin and destination patterns for Missouri and Illinois, as well as the entire United States.

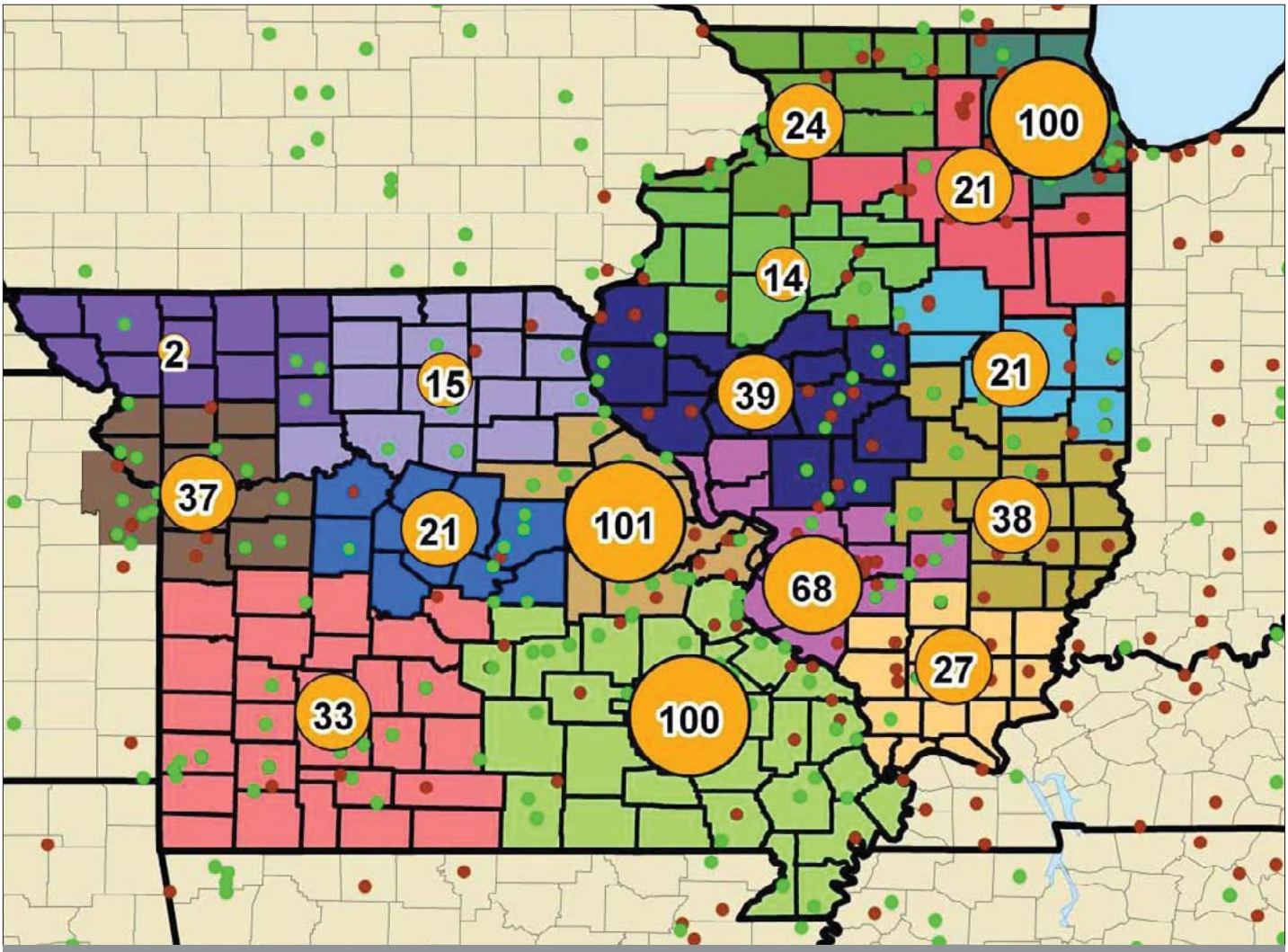


Figure 5.24 - Origin and Destination Patterns for Missouri and Illinois

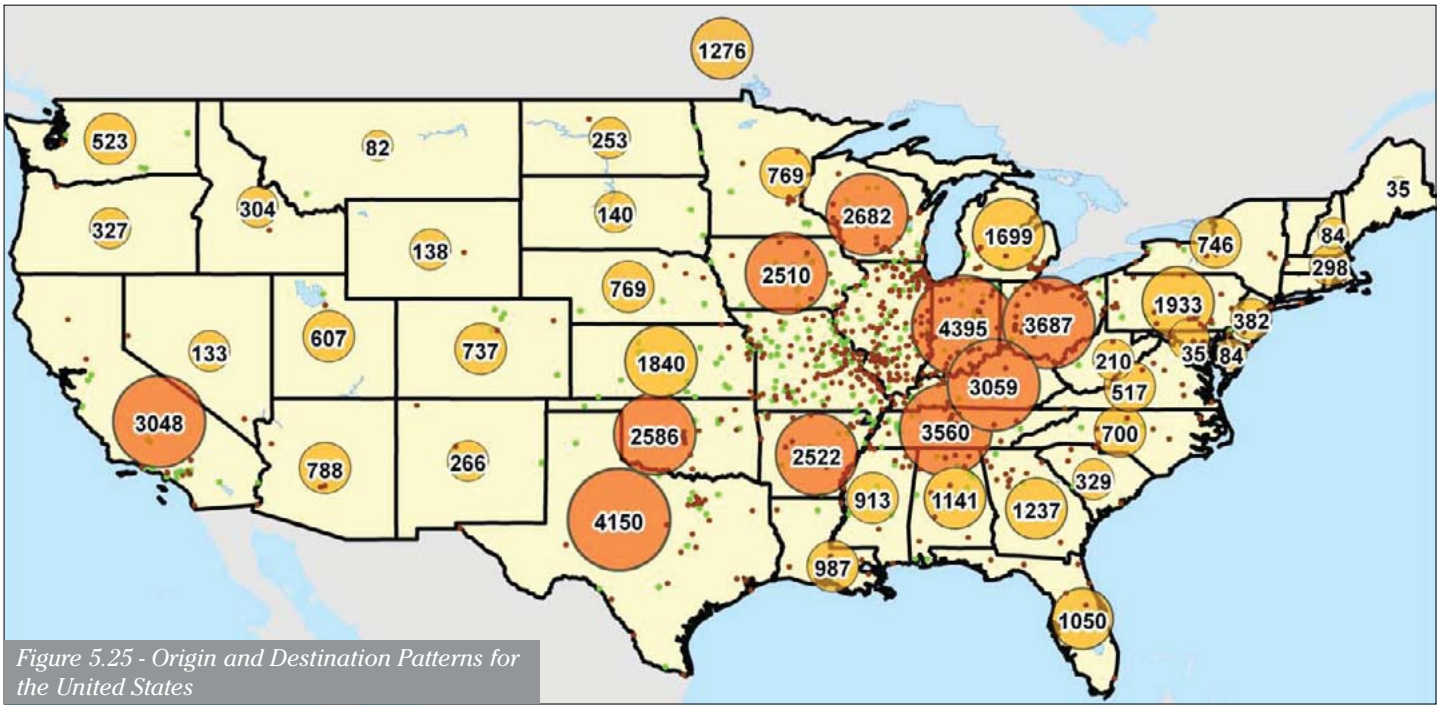


Figure 5.25 - Origin and Destination Patterns for the United States

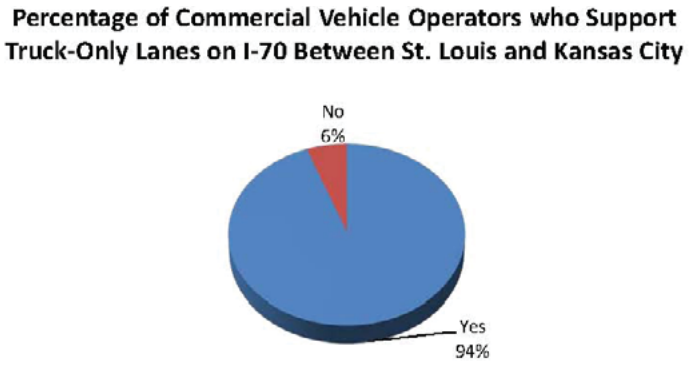


Figure 5.26 - Vehicle Operator Opinion of Truck-Only Lanes Concept

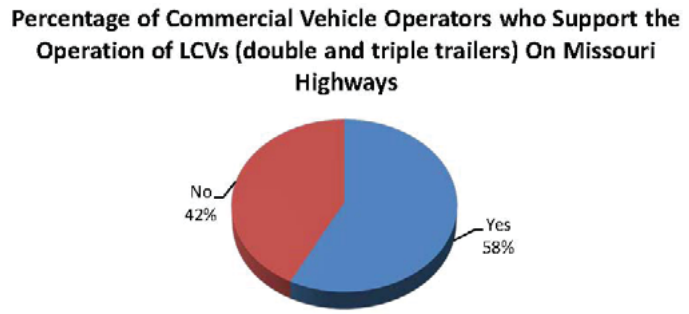


Figure 5.27 - Vehicles Operator Opinion of LCV's on Missouri Highways

Figure 5.28 - Vehicles Operator Opinion of Preferred Funding Mechanisms

Vehicle Operator Opinion Questions

In addition to the survey questions regarding travel data for commercial vehicles entering and exiting the St. Louis area, the survey also asked several vehicle operator opinion questions on the following topics related to the I-70 SEIS and the concept and funding of truck-only lanes:

- Would you support the construction of lanes on I-70 that would be used exclusively for trucks between St. Louis and Kansas City?
- Do you think longer-combination vehicles (LCVs) should be allowed on I-70 and other highways in Missouri?
- Would you prefer to fund highway construction in Missouri by paying an increase in: 1) fuel taxes, 2) registration fees, 3) tolls or 4) sales taxes?

It was found that of those vehicle operators surveyed, 94 percent supported the truck-only lanes concept on the I-70 Corridor, as shown in *Figure 5.26*. The vehicle operators provided input and comments such as the importance of proper enforcement of the truck-only lanes to keep passenger vehicles from using the lanes; the allowance of truck-specific speed limits within the lanes for better truck efficiency; and preferences on locating the lanes on the inside or outside of passenger vehicle lanes. The majority of drivers preferred the lanes on the inside.

The vehicle operator opinions concerning LCVs on Missouri highways was somewhat mixed, with 58 percent in support of LCVs and 42 percent in opposition, as shown in *Figure 5.27*. Many indicated a preference of allowing double trailer combinations, but not triple trailer combinations. Additionally, weather and highway condition (grades, curvature) should be considered when making the decision on what highways to allow LCVs to travel. There was also some feedback on the economic impacts of LCVs on owner-operator independent drivers versus larger trucking companies.

The vehicle operator opinions of various funding mechanisms to pay for transportation improvements was subdivided among the four potential funding mechanisms with the highest percentage, 36 percent, preferring increased sales taxes, followed closely by fuel taxes at 33 percent, then tolling at 18 percent and registration fees at 13 percent, as shown on *Figure 5.28*.

The issue of tolling with the vehicle operators generated the greatest amount of discussion – drivers were either very supportive or very opposed to the use of tolling to pay for needed improvements. In addition, many drivers supported using a combination of funding mechanisms instead of one specific funding mechanism.

St. Louis Truck Lane Corridor Study

The federal government along with the states of Missouri, Illinois, Indiana and Ohio are evaluating the addition of truck-only lanes to the I-70 corridor as part of the Corridors of the Future program. If successful, the Corridors of the Future Program will produce the following benefits:

- Improve public safety by separating freight and passenger vehicles.
- Combine truck and rail inter-modal facilities improving freight transfers.
- Standardize state regulations for truck load, length and speed.
- Avoid rail bottlenecks by providing inter-modal options for time-sensitive freight.
- Provide unique financing options for infrastructure improvements.
- Enable unique private sector investment incentives.
- Provide a testing for new truck technology, traffic management and freight.

Freight movement through St. Louis is currently served by the following corridors:

- I-70 and I-64 for east-west movement;
- I-44 for freight heading to and from the southwest;
- I-55 for freight heading north and south; and
- I-270, I-255, I-170 and State Route 370 interconnect these corridors.

To determine the likely corridor for truck-only lanes, the consultant developed a set of initial criteria, then narrowed the field to the three most likely corridors and rated these corridors on environmental, engineering and economic criteria.

If the truck-only lanes prove viable and consensus can be reached between governmental bodies, the next step for truck-only lanes within St. Louis would be a closer examination of the three alternatives and then adding the improvements to the Metropolitan Planning Organization's Long Range Transportation Plan (LRTP) and begin an Environmental Impact Statement (EIS). The EIS will better define the environmental, economic and cultural impacts while identifying a preferred alternative. Future steps will then be engineering design and construction to provide the fulfillment of the COF vision.

Both the I-70 Dedicated Truck Lanes O-D Study and St Louis Truck Lane Corridor Study discuss the benefit of improved infrastructure to serve the movement of goods into St. Louis, out of St. Louis and through St. Louis. The NRCC is strategically located to serve a potential dedicated truck route on either I-70 or I-270. This helps the NRCC market the area as a strategic location for businesses that use trucks to haul their goods.

F. AMEREN WHOLESALE STUDY

Ameren, among the Midwest's largest utilities, commissioned a study of opportunities for expanding the already robust Wholesale Trade sector throughout the two state service area of Missouri and Illinois. The initial premise was that the service area was an attractive geographic region for distribution centers and identified the following specific reasons why Wholesale Trade companies can prosper in this region.

- Selected business costs are at least 18 percent below national average for distribution centers.
- Stability and control of costs.
- Geographically positioned amidst a large regional customer base.
- Unsurpassed transportation infrastructure.
- A location likely to benefit from major shifts now occurring in international transportation lanes.
- An available labor pool with experience in all aspects of Wholesale Trade, distribution, logistics and related businesses.
- Nationally distinguished universities.
- 17 inter-modal terminals in an within driving distance of Ameren's service territory.
- Programs to assist businesses develop and expand facilities in a rapid and risk-averse path including highly competitive business and industrial development incentives.
- A high and diverse quality of life with many choices of living and working environments.

Ameren's wholesale study points out that the St. Louis region is an attractive geographic region for distribution centers for wholesale trade companies. This information can be used to help market the NRCC as a location where these types of businesses can locate and prosper.

G. MARKET ANALYSIS FOR BULK, LIQUID AND CONTAINERIZED CARGO

PMSL

- In 2009, the top 20 commodities accounted for 95 percent of two-way traffic at the PMSL. The MRT is part of the PMSL.
- The top commodity by volume in 2009 was coal and lignite, accounting for 39.1 percent of all cargo. This was followed by corn (12.4 percent) and soybeans (8.3 percent).
- The vast majority of the commodities are classified as "shipments" rather than "receipts". This means most of the cargo is effectively being exported out of PMSL

MRT

- MRT comprises 27 acres, with two public docks and storage facilities. It is the northernmost lock and ice free port along the Mississippi River.

- Top five commodities, by volume, accounted for 83 percent of the total volume over the past ten years, while the top ten commodities accounted for 93 percent of the total volumes.
- Top ten commodities at MRT include: salt, scrap, coal, coke, caustic, aluminum, bauxite, sand, magnetite and Ferro Manganese.

The NRCC Market Analysis provides an assessment and forecast of cargo for the MRT. This information provides the City with information that can be used to help market the MRT area to businesses but more importantly, it identifies strengths and opportunities and provides a road map on how to take advantage of these resources. It also identifies weaknesses and threats that are helpful to understand areas to be aware of as the area plans its future development.

H. ST. LOUIS REGION TIGER II APPLICATION, ENHANCING FREIGHT AND COMMERCE

The TIGER II application represents a multi-modal effort to improve existing freight-related facilities, enhance access to new and existing facilities, and make the most of new domestic and national opportunities for the St. Louis region. The application identifies a package of freight-related projects that work together to expand and enhance goods movements to, from and within the St. Louis region, while encouraging significant regional, national and international opportunities for expansion of freight facilities and growth of the economy. The six projects included within the application were the Port of East St. Louis, the I-55/McNutt Interchange, I-70 from TR Hughes to MO K, MRT, Air Freight Hub and the I-170 Interchange at Scudder Road, which are described in greater detail in the Analysis of Regional Needs (Supply Chain, Containerization, and Inter-Modal Trade).

The TIGER II application represents an opportunity to the NRCC to be an integral part of a regional freight plan for St. Louis. A regional freight plan could mean identify improvements such as an inter-modal hub located in the NRCC or somewhere else in the metropolitan area that the NRCC could partner with in the future. In addition, a regional plan could help identify funding opportunities for regional freight bottlenecks. The TIGER II application also included the MRT within its application, highlighting it as a key freight infrastructure need for the region.

I. EAST-WEST GATEWAY REGIONAL TRANSPORTATION PLAN

The Regional Transportation Plan is a blue print to help regional decision-makers make transportation decisions that are consistent with regional goals. Within the RTP, A Framework of Ten Principles was established through an engagement process to provide guidance on regional values and in turn guide the development of the region's next long range plan. One of the ten principles, Strengthen Inter-Modal Connections, focuses on connecting points between transportation modes in order to provide efficient flow of people and goods. From a freight perspective, these connections occur at points where shipments can be transferred between modes, i.e., truck, barge, pipeline, train, and airplane. Increasing the opportunities for these types of connections enhances the effectiveness of the overall transportation system, providing improvements in both mobility and economic efficiency.

Within the Principles and Strategies identified in the Framework, strategies were developed to guide transportation system evaluation and decision-making over the course of the plan. Two of the strategies focus specifically on a regional freight study to improve the diverse economy and strengthen inter-modal connections.

- Support a diverse economy throughout the region
  - Strategy: Conduct a regional freight study to evaluate the adequacy and economic impact of the existing regional freight system and the future economic growth potential based on the region's assets and industry/market trends.
  - Strategy: Develop a strategic freight investment plan
- Strengthen Inter-Modal Connections
  - Strategy: Evaluate, within the context of the regional freight study, the adequacy of inter-modal connections and implement projects needed to correct deficiencies

The NRCC's vision is consistent with *Legacy 2035*. The East-West Gateway Regional Transportation Plan identifies the importance of a diverse economy captured through an investment in freight planning.

Freight SWOT Analysis

The HNTB Team met with a variety of stakeholders to gain their insights on freight movements both within the NRCC and within the St. Louis region. Interviews were conducted in-person.

The stakeholders were asked several questions including the types of commodities that they ship, the mode of shipment, operational constraints within the study and the region, strengths, weaknesses, opportunities, threats, and trends. The following sections summarize the feedback received within a SWOT analysis.

STRENGTHS

Truck:

- Central Location to Highway Network: The NRCC is immediately adjacent to I-70 and close proximity to the regional interstate network of Interstate 55, 64, 44, 270, 255, and 170.
  - At the March 24, 2011 public meeting for the study, 'Highway Access' was the top response to the question of why the attendees chose to locate their business in the area. 'Access to highway, downtown, and new bridge' was the highest rated response to the question of top advantages of the area.
- The New Mississippi River Bridge, scheduled to open in 2014, will further strengthen the trucking connection to the NRCC.
- Adelaide Grade Separated Connection: The recent grade separated crossing at Adelaide was repeatedly mentioned by stakeholders as key access point and strength. The next adjacent street to the north and south, Carrie Avenue and Grand Boulevard respectively, are not grade separated.

Rail:

- Access to Six Class I Railroads: BNSF and Norfolk Southern have tracks in the NRCC. Through the Terminal Railroad Association, access to six Class I railroad is possible. The Six Class I railroads include: BNSF, Norfolk Southern, Union Pacific, CSX, CN, and Kansas City Southern.
- Quick Service and Less Congestion: Getting a rail car through the Terminal Railroad Association typically could be done in a day. Other cities such as Chicago, getting rail cars could take multiple days. Especially for smaller businesses and manufacturers who may only need infrequent rail service, this level of service was important.
- Connections to Coasts: Service to coast requires less than 50 hours.

River:

- Northern Most Lock-Free Port: Port of Metropolitan St. Louis can bring 40-50 barge tows. North of St. Louis, only up to 15 barge tows can be accommodate through the lock system.
- Fleeting Space: Current fleeting space is satisfactory, but additional space could always be used.

Inter-Modal:

- Central Location: From a regional perspective, St. Louis is situated to service the Midwest and coast regions. The NRCC is centrally located within the region with access to highway, river, and rail.

WEAKNESS

Truck:

- *Bottleneck a*t Grand: The close proximity of the I-70 ramps and North Riverfront at Grand already creates a less than ideal intersection at I-70 and Grand Avenue. The at-grade rail crossing at Grand furthers this problem and creates a bottleneck.
- Stakeholders mentioned that local truckers tend to use Adelaide, which is grade-separated, and over the road truckers tend to use Grand, not knowing of the at-grade conflict.
- Slip Ramps at Madison and Access to the MRT: Although Market is the main entrance to the MRT, access to Market comes from multiple connections. The reasons for this includes the lack of a full interchange at I-70 near the MRT. Currently, trucks can take a slip ramp at Madison, exit at Branch, or Salisbury. This lack of a designated freight route into the MRT create more truck traffic on local streets.
- Market Street Congested: Access road has helped. Branch at-grade crossing.
- Hall Street Flooding: Stakeholders mentioned that flooding along Hall Street did not create a functional issue with their truck shipments. Their trucks can still utilize the interior lanes of Hall during a flood event. However, long term a fully functional Hall Street with a connection to I-270 will be needed for freight movements in the NRCC.
- Existing Sites Not Ideal Size for Truck Distribution.
- Turning Movements: St. Louis Avenue and other intersections.
- Many Streets in Poor Condition. Flat tires from scrap. Pavement in poor condition.
- Highway bottlenecks identified in the MPO's LRTP that have a negative impact on regional infrastructure needs.

Rail:

- At-Grade Crossings: Causes 30-90 minute delays for vehicular traffic. (Grand, Branch, Humbolt). Limits the number of cars going into American Commercial Lines ACL). ACL must unhook trains.
- Mississippi River Bridges: Merchants Bridge needs $150M in repairs. Current load rating for the Merchants Bridge is lower than Cooper E-40. Current design standard is E-80. MacArthur Bridge is currently up to 90 percent capacity in terms of traffic. Further delays in repairing Merchants could create delays on MacArthur.
- Inefficiencies in terminal railroad operations create delays in organizing and readying trains for shipments to national and international markets.
- Humbolt rail crossing is major conflict. Limits train to 125 cars. Must un-hook. About a 45-60 minute delay.
- Existing industrial rail spurs lack availability of adequate storage to assemble longer trains.

WEAKNESS (RAIL) CONTINUED

- Rail corridors run parallel to the primary road system in the NRBC, creating few opportunities to relocate streets and assemble larger development lots.
- Several rail/roadway crossing points create bottleneck and safety issues for both truck and railroad operations.
- Existing facilities under capacity: Existing freight yards are operating under capacity, especially since the recession. Limited expansion planned.

River:

- Lack of Investment: Current gas tax is only generating approximately 1/5th of the needed revenue for waterway investment. Needed investment is approximately $500-700 million a year. There is also discussion of moving away from a gas tax to a lock and dam fee structure.
- Shipping times compared to other modes: Shipping up river on barge from New Orleans to St. Louis is up to 6 times long on barge than by rail.

Inter-Modal:

- Recent Development Elsewhere: The St. Louis region is being bracketed by new and recent inter-modal facilities in other Midwestern locations such as Kansas City, Chicago, Dallas, Memphis, and Ohio. This may limit development opportunities in the St. Louis region.

OPPORTUNITIES

Truck:

- Dedicated truck lanes through St. Louis as part of an 800 mile U.S. DOT Corridor of the Future Program.
- Hall Street Freight Connection: For the NRBC to take advantage of the future dedicated truck only lanes, Hall Street needs to be improved from Adelaide to I-270.
- ITS: Within the NRBC, ITS can be used to help truck freight move more efficiently by avoiding bottlenecks at the I-70/Grand Intersection. Regionally, ITS should further be utilized for freight.

Rail:

- Rail Focused Development: Within the NRBC, sites along the Terminal Railroad Associated should be marketed for manufacturing. Companies that may need only a few rail cars a week can better be served in the less congested St. Louis Market as opposed to Chicago or elsewhere. Through Terminal Railroad, companies can access Six Class I railroads.
- Union Pacific Desoto Facility: Union Pacific's Desoto yard may offer the best opportunity for expansion and inter-modal use with its proximity to interstate I-255 and adjacent land.
- Third Mississippi Rail Bridge: A third river bridge for rail would provide assurance of efficient regional and national freight movements.
- NRCC Rail Yard: An approximately 30 acre rail yard for the Terminal Railroad Association to store rail cars would increase the ability to serve customers within the NRCC.

River:

- Marine Highway: MARAD's Marine Highway Program is focusing federal attention and funding on river freight opportunities.
- Empty In-Bound Barges: Approximately 50 percent of inbound barges are empty. Barge companies are looking for opportunities for additional in-bound commodities. Although during parts of the year (harvest), the need to quickly get empty barges back to St. Louis outweighs the opportunity for additional inbound cargoes.
- Commodities: Trends in commodities opportunities includes: Project cargoes and wind components. There is also an increase in domestic shipping.
- Rail to Water: As St. Louis is the northern-most ice free port on the Mississippi River, freight shipped by rail to barge is an existing strength with commodities such as coal and grain. The trend is continuing to be a strong opportunity with the announcement in April 2011 by Bunge North American of a state of the art river grain terminal in Fairmont City, Illinois.

Inter-Modal:

- Utilize opportunities identified in the RCGA Cluster Analysis and RCGA Global Freight Hub study to maximize regional opportunities.
- East-West Gateway freight study will identify further regional opportunities that can benefit the NRCC and region.
- Freight focused economic development organization will help grow the NRCC and regions industry by attracting businesses with transportation and logistics elements and help make the industry more competitive in the movement of goods into, out of and through the metropolitan area. This organization would also help foster public/private partnerships.
- Multi-modal partnerships could be formed to create linkages, acknowledge connections and encourage cooperation between the various modes that transport freight to, from and between freight distribution centers in the metropolitan area.
- Aerotropolis is an opportunity to develop a new air freight hub located at the Lambert-St. Louis International Airport to benefit the region.
- Freight Development Zones were identified in the East-West Gateways' TIGER II grant application.

THREATS

Truck

- Future Shortage of Drivers: Upcoming changes in truck driver qualifications are expected to create a shortage of truck drivers in the future.
- Perception of Congestion: There is a perception, in regards to the NRBC, that the area is congested because it is close to the urban core.

Rail

- Existing Fees by Terminal Railroad: Opinion was mixed by stakeholders whether fees by the Terminal Railroad Association were a threat or not a factor in terms of rail shipments.
- Mississippi River Bridges: Merchants Bridge needs $150 million in repairs. Current load rating for the Merchants Bridge is lower than Cooper E-40. Current design standard is E-80. MacArthur Bridge is currently up to 90 percent capacity in terms of traffic. Further delays in repairing Merchants could create delays on MacArthur.

River

- Lack of Investment: Current gas tax is only generating approximately 1/5th of the needed revenue for waterway investment. Needed investment is approximately $500-700 million a year. There is also discussion of moving away from a gas tax to a lock and dam fee structure.
- Shipping times compared to other modes: Shipping up river on barge from New Orleans to St. Louis is up to 6 times long on barge than by rail.

Inter-Modal:

- Freight focused economic development organizations like KC SmartPort that attract businesses away from St. Louis.
- Fast Changing Supply Chains: Supply chains can quickly evolve and reconfigure within 18-24 months due to political, regulatory, infrastructure, or financial factors. While this is a threat, it is also an opportunity to attract new investment from elsewhere.

Opportunities for Supply Chain / Value-Added Businesses

Supply chain and value added businesses improve the movement of goods from the vendor to the eventual consumer by locating distribution and value added sites along the shipment route. Supply chain businesses are located along key trade corridors. In order to better understand how supply-chain and value added businesses along with the associated jobs they create can be attracted to locate within the NRCC, a review of freight-focused economic development organizations within
the United States was conducted.

What is the purpose of a freight-focused economic development organization?

Freight-focused economic development organizations focus on attracting transportation and logistics companies to a metropolitan area. These forms of organizations have the following key goals:

1. To grow the metropolitan area's transportation industry by attracting businesses with significant transportation and logistics elements;
2. To make the industry and the region more competitive in the movement of goods into, out of and through the metropolitan area.

Why are these types of organizations needed in a metropolitan area like St. Louis?

Today, international trade is emerging as an important inter-jurisdictional issue in the Midwest region. NAFTA trade in Midwestern states like Missouri and Illinois is growing, and opportunities exist to provide value-added services for NAFTA goods processing in the metropolitan area. There is a need for a single organization with a sole focus on growing the transportation industry businesses and logistics as a specific focus within the region's overall economic development plan.

What are the primary initiatives of these types of organizations?

The primary initiatives of the organizations include the following elements:

- Economic Development - attracting investments from companies with significant transportation and logistics elements such as distribution centers, warehouses, third-party logistics providers, and manufacturers.
- Business Services - working to bring additional services, such as foreign customs offices, to a metropolitan area to aid business of all sizes in moving their goods both domestically and internationally.

FREIGHT FOCUSED ECONOMIC DEVELOPMENT ORGANIZATIONS STAKEHOLDER INTERVIEW

The project team interviewed Kansas City SmartPort to develop an understanding of the opportunities that could be brought to the St. Louis region and the NRCC. Below are responses to some of the questions asked.

1. How does your agency provide value-added services within the supply chain businesses?

Our agency provides value-added services in a number of ways:

- Marketing – Being able to sell your community globally
- Networking – Bringing companies together to fill gaps
- Education – Bringing information and data to investors
- Credibility – Bringing a central, knowledgeable organization to help investors

2. How does your agency help attract businesses to the region?

Our agency helps attract businesses to the region. Business deals come from the site selection consultant. However, our agency helps to maintain a database of site selection consultants and a database of more than 3,500 supply-chain businesses. This information is then shared with site selection consultants to better help them attract businesses to the region.

Another way that we help attract businesses to the region is by attending key warehouse conferences to showcase our region. This gives us the opportunity to market our region as well as be educated on the current needs of the supply-chain businesses.

Finally, advertising in transportation periodicals, trade magazines and logistics magazines provides us an opportunity to reach out to our future customers at a national level.

3. What types of incentives are used to attract businesses to the region?

Providing incentives to attract companies to the region is an important factor to successfully bringing businesses to our metropolitan area. Our freight focused economic development agency is a neutral partner that only helps broker the deal and does not make recommendations on location. States, cities, and counties make decisions on what incentives to offer businesses. Companies need to be in the "ready mode" to take advantage of opportunities that arise. Our agency works with the regions chamber of commerce and economic development corporation towards bringing value added services to the site location process by simplifying the process and providing efficiency for the evaluation and selection process. Incentive packages that are developed are unique to each prospective company. The primary drivers however are: jobs, wages, and capital investment packages. *Tables 5.5* and *5.6* on the following page provide a partial list of potential tax and other incentives that are used to help attract businesses to the region.

Business Formation Fees	Sales & Use Taxes
Corporate Franchise Taxes	Unemployment Insurance
Corporate Income Taxes	Workers' Compensation
Individual Income Taxes	Property Taxes

Table 5.5 - Tax Incentives

Advanced Energy	International Trade Incentives
Enterprise Zones	Life Sciences and R&D Incentives
Financing Programs	Property Tax Exemptions
Foreign Trade Zones	Sales & Use Tax Exemptions
Income Tax Credits	Training Programs

Table 5.6 - Other Incentives

4. How do inland foreign trade zones play a role in Kansas City's freight hub success.

Foreign Trade Zones (FTZs) were created in the United States to provide special customs procedures to U.S. plants engaged in international trade-related activities. Duty-free treatment is accorded items that are processed in FTZs and then re-exported, and duty payment is deferred on items until they are brought out of the FTZ for sale in the U.S. market. This helps to offset customs advantages available to overseas producers who compete with domestic industry.

5. What do you see as the key challenges to further developing Kansas City as a freight hub?

Any metropolitan area in the United States is having to deal with the turndown in the economy. The key challenges to further developing the region as a freight hub are:

- Reduced product – Need to have building supply ready to go
- Perception of Kansas City – Need to get the word out of the benefits of Kansas City
- Infrastructure Needs - staying ahead of market (Freight focused investment to address highway and rail congestion.

Analysis of Regional Needs (Supply Chain, Containerization, Inter-Modal Trade)

REGIONAL TRANSPORTATION NETWORK

The NRCC is centrally located within the metropolitan area of St. Louis. Regional infrastructure connectivity from all modes of transportation helps to link the NRCC to the St. Louis metropolitan area and the heart of America. In order to better understand the existing freight modal infrastructure available in the region, a high level inventory of the existing regional freight transportation network was

performed.

The St. Louis region offers connections to 7 major interstate corridors, including I-70, I-44, I-55, I-64, I-270, I-255, and I-170. Additionally, Highway 40, 61 and 50, as well as routes 370, 100, 3, 94, 364 (Page Extension), all offer good highway connections to freight centers in the region. The region is home to the nation's third largest rail hub, bringing together six Class I railroads, including the Burlington Northern Santa Fe, CSX Transportation, Kansas City Southern, Norfolk Southern, Union Pacific, and Canadian Northern. The St. Louis region also has exceptional access to the nation's two largest rivers, both allowing navigable commerce – the Mississippi and Missouri. From an aviation standpoint, St. Louis has two airports providing air cargo transport – the Lambert-St. Louis International Airport and the MidAmerica Airport in Belleville, Illinois. The Lambert-St. Louis Airport is also the potential future home of a new Midwest-China air freight hub, referred to as Aerotropolis. It can be seen that the NRCC is well-positioned to connect to a significant number of major interstate, rail and river corridors in the region.

The East-West Gateway Council of Governments has also identified a primary goods movement network for the region within their long-range transportation plan, Legacy 2035. The NRCC is a key hub for key identified inter-modal freight centers and shippers and receivers within the region.

NRCC TRANSPORTATION NETWORK

The I-70 corridor and two highway bridges – the new I-70 Mississippi River Bridge and the McKinley Bridge will directly serve the NRCC, as well as the Merchants Railroad Bridge. The NRCC also has direct access to the Mississippi River and the MRT.

REGIONAL FREIGHT DISTRIBUTION CENTERS

The key freight distribution centers and freight terminals in the region were identified and are shown in Figure 5.29. Multi-modal partnerships could be formed to create linkages, acknowledge connections, and encourage cooperation between the various modes that transport freight to, from and between these freight distribution centers and freight terminals. These partnerships will help enhance opportunities for new business and transportation connectivity within the bi-state St. Louis region, which would also influence growth and development in the NRCC.

FREIGHT NEEDS AND OPPORTUNITIES

Once the high level inventory of the existing St. Louis regional freight network was completed, the project team evaluated the NRCC and regional supply-chain, containerization, and inter-modal trade needs and opportunities. The needs were established through interviews with key freight and transportation industry stakeholders and a review of past freight-related studies performed within the region. The freight needs and opportunities are organized into the following categories:

- Infrastructure needs
- Policy/regulatory needs
- Institutional needs

In addition, the East-West Gateway Council of Government plans to conduct a St. Louis regional freight study in 2011 to further evaluate regional freight needs and opportunities.

NRCC TRANSPORTATION AND INFRASTRUCTURE NEEDS

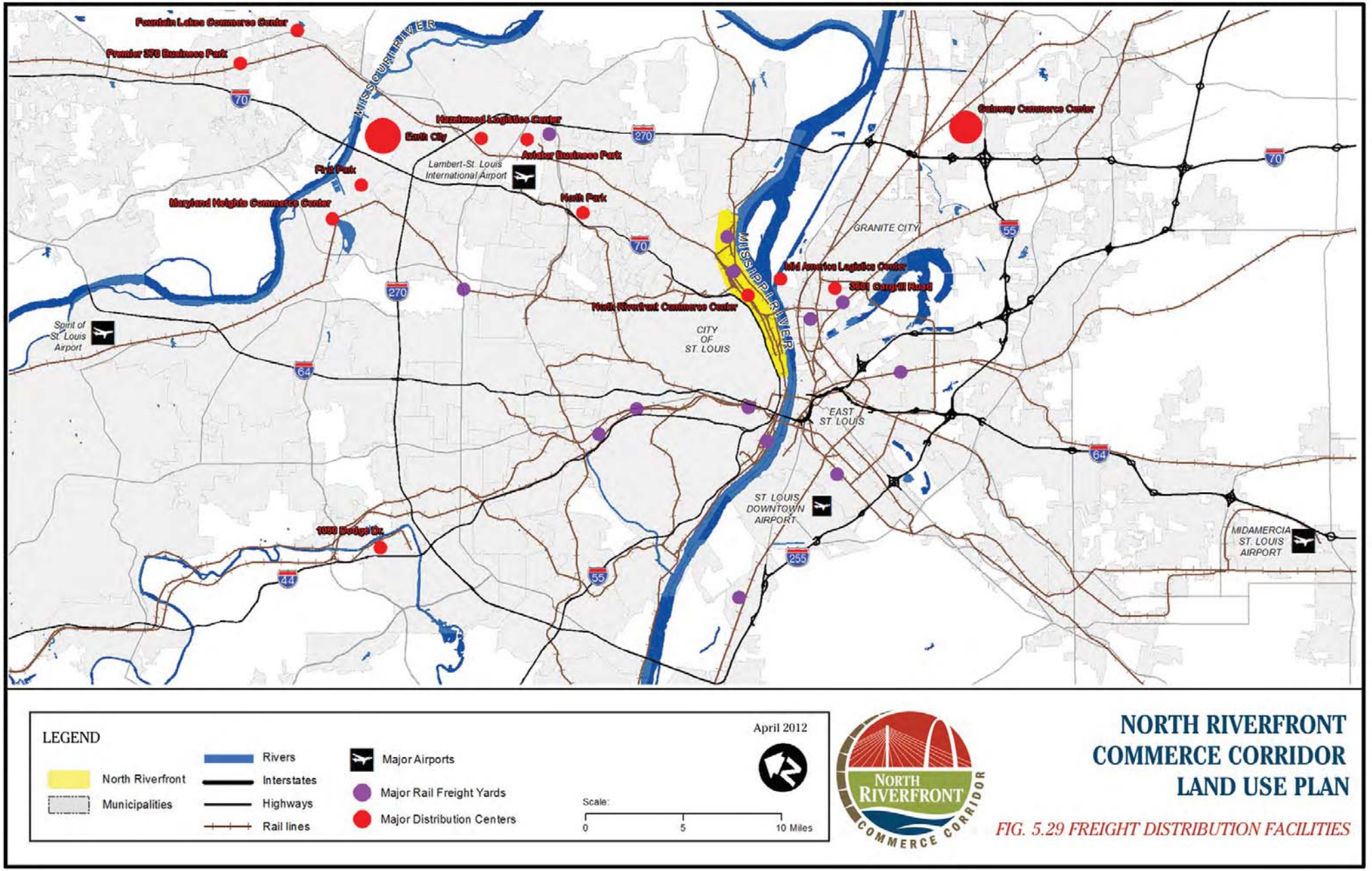
The infrastructure needs for the NRCC are categorized by mode and represent those needs identified during the stakeholder interviews or within past freight-related studies.

Highways

- Improved Freight Mobility and Access – Comments from stakeholders and team assessment has led to the conclusion that improved freight mobility and access both on the highways and local streets is important to the future of the NRCC.
- Dedicated Truck Lanes – The I-70 Supplemental EIS conducted by MoDOT and the four-state I-70 Dedicated Truck Lanes Feasibility Study conducted for the U.S Department of Transportations' Corridors of the Future program have identified the need for dedicated truck lanes through the St. Louis region, either on the I-70 corridor or another major parallel east-west roadway corridor, such as I-270, Route 370, etc. to serve heavy truck traffic movements across the I-70 corridor between Kansas City, Missouri and the Ohio-West Virginia border. (I-70 St. Louis Truck Lane Corridor Study and I-70 Dedicated Truck Lanes Feasibility Study). This could influence the NRCC if MoDOT and its partners approved the construction of the dedicated truck lanes on I-70 within St. Louis.
- Bottleneck at Grand - Stakeholders indicated that the close proximity of the I-70 ramps and North Broadway at East Grand already creates a less than ideal intersection at I-70 and Grand Avenue. The at-grade rail crossing at Grand furthers this problem and creates a freight bottleneck. (Stakeholder Interviews)
- Slip Ramps at Madison and Access to the MRT - Although Market is the main entrance to the MRT, access to Market comes from multiple connections. The reasons for this include the lack of a full interchange at I-70 near the MRT. Currently, trucks can take a slip ramp at Madison, and exit at Branch or Salisbury. This lack of a designated freight route into the MRT creates more truck traffic on local streets.

Local Streets

- Market Street Congestion - The new access road has helped, but the Branch Street at-grade crossing is still an issue.
- Hall Street Flooding - Stakeholders mentioned that flooding along Hall Street did not create a functional issue with their truck shipments. Their trucks can still utilize the interior lanes of Hall during a flood event.



NORTH RIVERFRONT COMMERCE CORRIDOR LAND USE PLAN

FIG. 5.29 FREIGHT DISTRIBUTION FACILITIES

However, long term a fully functional Hall Street with a connection to I-270 will be needed for freight movements in the NRCC.

- Turning Movements at St. Louis Avenue – Turning movements at this location are not satisfactory for heavy truck movements and need improvement.
- Many Streets in Poor Condition – Stakeholders mentioned that many of the street connections within the NRCC are in poor condition and need improvement for better operations.

Rail

- Improvement of Merchants Bridge -$13.5 million to Missouri for design work associated with the replacement of the Merchants Bridge on the Mississippi River on the Chicago-St. Louis HSR Corridor.
- At-Grade Crossings - There is a need to minimize or eliminate at-grade crossings at key highway/roadway points. The stakeholder interviews indicated that these at-grade crossings can cause 30-90 minute delays. Key areas mentioned included Grand, Branch and Humbolt. (Stakeholder Interviews)

Ports and Waterways

- MRT – This terminal offers the only public dock on the Missouri side of the Mississippi River located within the U.S. Army Corps of Engineers' 70-mile Port of Metropolitan St. Louis. The MRT needs dock and yard facilities repair and improvements to yard storage, layout and operations. The MRT is located within the NRCC and directly affects this study. (East-West Gateway TIGER II Grant Application and Stakeholder Interviews)

Institutional Needs

- Public-Private Partnerships and Cooperation – There is a need to better coordinate and develop guidelines for freight focused public-private industry partnerships and funding opportunities since a large portion of freight-related commerce and needs are transported on private industry infrastructure.
- Freight Development Zones – There is a need to identify and form Freight Development Zones within the region based on assets, activity levels, land availability, and potential synergies. This was a key opportunity identified for the region within the East-West Gateway's regional TIGER II grant application. (East-West Gateway TIGER II Grant Application). This could influence the NRCC since one key location for a freight development zone would be the NRCC.

REGIONAL TRANSPORTATION AND INFRASTRUCTURE NEEDS

The infrastructure needs for the St. Louis region are categorized by mode and represent those needs identified during the stakeholder interviews or within past freight-related studies. In addition, the St. Louis Regional TIGER II application, Enhancing Freight and Commerce, identified several key areas within the region, considered to be of priority for freight.

Highways

- I-170 Interchange at Scudder – There is a need to upgrade the existing interchange from a partial interchange to a full interchange, as well as partially realign North Hanley Road at Scudder, less than one-quarter mile east of I-170. These improvements would improve access to the NorthPark site and nearby Boeing Aircraft facilities and will alleviate congestion on local roads. This will also help redevelop the 550-acre NorthPark area and provide additional access to the interstate highway system for I-70 and I-270 for the potential Air Freight Hub (Aerotropolis) at Lambert St. Louis International Airport. The NorthPark site is also considered to be a prime location for a new distribution center by the Chinese government. (East-West Gateway TIGER II Grant Application)
- I-55/McNutt Interchange – There is a need for McNutt roadway widening and interchange reconstruction to open up the surrounding area in Herculaneum within Jefferson County for redevelopment. There is a need to convert the existing Doe Run property into a multimodal industrial port serving river, rail, and highway users. This will then greatly expand the use of McNutt Road for industrial and port-related traffic. (East-West Gateway TIGER II Grant Application)
- I-70 from TR Hughes to MO K – Widening improvements are needed for one mile on the I-70 Corridor to address congestion and improve safety. The proposed improvement is to extend a fourth lane on I-70 to Route K, which has heavy traffic volumes exiting I-70. (East-West Gateway TIGER II Grant Application)
- Dedicated Truck Lanes – The I-70 Supplemental EIS conducted by MoDOT and the four-state I-70 Dedicated Truck Lanes Feasibility Study conducted for the U.S Department of Transportations' Corridors of the Future program have identified the need for dedicated truck lanes through the St. Louis region, either on the I-70 corridor or another major parallel east-west roadway corridor, such as I-270, Route 370, etc. to serve heavy truck traffic movements across the I-70 corridor between Kansas City, Missouri and the Ohio-West Virginia border. (I-70 St. Louis Truck Lane Corridor Study and I-70 Dedicated Truck Lanes Feasibility Study)
- Interstate Connections at Poplar Street Bridge – While constructing a new I-70 Mississippi River bridge will help alleviate congestion for highway crossings of the Mississippi River, there is still a need to improve connections from Illinois to the I-55, I-44 and I-64 corridors on the Missouri side. The existing interchange connection on the Missouri side of the Poplar Street Bridge has challenging ramp connections to these corridors. (I-70 St. Louis Area Truck Origin-Destination Study)

Rail

- New Mississippi River railroad bridge crossing – Existing railroad bridge crossings of the Mississippi River are at or near capacity. These bridges are the McArthur bridge (80 to 90 percent at capacity) and the Merchants bridge (functionally deficient and needs $150 million in repairs); both are owned by the TRRA. The

region needs a new railroad bridge crossing for more capacity and flexibility. (Stakeholder Interviews; TRAA Interview)

Ports and Waterways

- Jefferson County River Terminal –There is a need to convert the existing Doe Run property into a multi-modal industrial port serving river, rail, and highway users.
- Port of East St. Louis – This port needs improved multi-modal mobility and redevelopment of 200 acres of a former 1930s industrial site along the Mississippi River. The site needs includes the construction of two docks; road, rail and electrical infrastructure; one 30,000 square foot bulk fertilizer warehouse facility; two cargo cranes (150 ton capacity); and a 10-acre concrete pad. The project is envisioned as a public-private partnership. (East-West Gateway TIGER II Grant Application)
- Missouri River Infrastructure Needs – The Missouri River Freight Study indicated that the key infrastructure needs along the river include a freight facility inventory, improved inter-modal connectivity, and other specialized solutions (low flow, COB, docks, etc.). (Missouri River Freight Study)

Aviation

- New Air Freight Hub (Aerotropolis) – This project has also been referred to as Aerotropolis. This proposed project would develop a new air freight hub located at the Lambert-St. Louis international Airport for increased trade between the Midwest and China. The Air Freight Hub is an initiative by representatives from China, the State of Missouri, St. Louis County and the City of St. Louis to develop St. Louis as the Midwest hub for U.S. and China commerce. The proposed improvements are chiefly to construct roadway infrastructure to access freight handling and distribution facilities. (East-West Gateway TIGER II Grant Application and RCGA Regional Cluster Analysis)

Policy/Regulatory Needs

- Regional Freight Study – There is a need to conduct a regional freight study to develop a strategic regional inter-modal freight investment plan and study and coordinate current and future freight needs and assets. The study is being championed by the East-West Gateway Council of Governments. The study would be needed to evaluate the efficiency of existing freight facilities, identify problems and opportunities, analyze potential solutions and set priorities for regional investment in the transportation system. (East-West Gateway TIGER II Grant Application)
- Longer-combination Vehicles – As identified within the I-70 Truck Lane Corridor Study and other I-70 dedicated truck lanes studies, the allowances of longer-combination vehicles usage on key major highway corridors through the region would provide an opportunity to increase freight productivity and open up new ways of doing business for regional shippers and carriers. (I-70 St. Louis Area Truck Origin-Destination Study)
- Railroad Container Size Allowances – Since St. Louis is the nation's third largest rail hub, there is a need to ensure the bi-state region can take advantage of industry trends in size and height allowances for rail container transport to stay competitive with other regions and increase overall rail productivity.
- Missouri River Navigation Season Restrictions – As identified in the Missouri River Freight Study, the seasonal window of opportunity for commercial navigation and transport on the Missouri River impacts the amount and types of commodities that can be transported effectively by barge, as well as affects business decisions on where to locate inter-modal facilities. (Missouri River Freight Study)
- Market St. Louis as America's original multi-modal inland port – As indicated within the RCGA's Regional Cluster Analysis, there are opportunities to brand the St. Louis region as "America's Gateway Port" and highlight the region's multi-modal assets. There is a need to engage a coalition of shippers, transportation and logistics providers, brokers and additional industry experts to guide the initiative and outreach effort. (RCGA Regional Cluster Analysis)

Institutional Needs

As discussed in the NRCC needs discussion, there are institutional needs that also affect the region.

- Public-Private Partnerships and Cooperation – There is a need to better coordinate and develop guidelines for freight focused public-private industry partnerships and funding opportunities since a large portion of freight-related commerce and needs are transported on private industry infrastructure.
- Regional Freight-Focused Economic Development Organization - Develop an overarching freight-focused economic development organization to assist with identifying, attracting and brokering deals for supply chain businesses for the region.
- Freight Development Zones – There is a need to identify and form Freight Development Zones within the region based on assets, activity levels, land availability, and potential synergies. This was a key opportunity identified for the region within the East-West Gateway's regional TIGER II grant application. (East-West Gateway TIGER II Grant Application)

MRT Conceptual Planning

The objective of the task was to develop alternative conceptual plans for the MRT facility that draw upon principles of industry best-practice in terminal operations. The City will be developing a new agreement with an Operator for activities to commence in 2012. In advance of this, the City wishes to develop a strategic vision for use as a starting point in discussions with potential Operators. In recognition of this, the City is interested in understanding the facility's potential in terms of capacity that may be handled, principles for safe and efficient cargo-handling operational practices, and factors influencing operational decisions.

The actual facility layout and operations will be dictated by a number of factors including customer demands and needs, the Operator's business model, and availability of funding for infrastructure investment. Given its mandate as a public facility, the MRT facility must be available to handle a variety of cargo types and serve all parties interested in moving goods. The existing condition of the facility is considered to be poor and significant capital investment is required to initially bring it to a state of good repair, prior to considering any new capital investments to improve the facility. The discussion and concept plans presented herein are thus provided for illustrative purposes to present a range of what we would recommend that the City should consider, in negotiating any new agreement(s) with existing or new Operator(s). It would be expected that any discussions and negotiations with a new Operator will look at investment trade-offs and opportunities as well as timing.

This section summarizes the existing conditions and site constraints, introduces principles for best-practice in facility planning, assesses facility capacity, and presents a number of alternative conceptual plans.

MRT Existing Conditions

This section describes the MRT facility's existing conditions including boundaries, existing structures and layout, entrances and circulation and site constraints. Combined with the market forecast and industry-standard port operating practices, the existing conditions formed the basis for developing the recommended infrastructure improvements and conceptual plans.

FACILITY BOUNDARIES

The MRT facility comprises a 27-acre site located in the North Riverfront district along the Mississippi River. The western boundary is approximately 3,700 feet long and is defined by a concrete floodwall which runs most of the facility's length. The depth of the facility's upland area varies – there are approximately 400 feet from the floodwall to the south dock and 300 feet from the floodwall to the north dock. The facility narrows to the north and south, and is on average approximately 225 feet wide at the southern portion and 135 feet wide at the northern portion.

EXISTING STRUCTURES AND LAYOUT

The MRT facility has suffered from a lack of investment, and the physical conditions have deteriorated over time, leading to hazardous conditions in some places. A new 2,000 linear foot dock is currently in the design phase. This dock will expand the wharf area, by filling in the area between the north and south docks, and by significantly extending the usable area of the southern dock.

The southern warehouse is understood to have a usable area of 90,000 square feet and runs parallel to the south dock. It is further understood that an investment was recently made in the foundation and loading docks of the warehouse. The rail trench along the eastern side of the warehouse still remains, which allowed for direct loading of boxcars from the same level as the warehouse's floor; however, it is currently understood to have been out of service for quite some time. There is an active rail spur along the western side of the warehouse adjacent to the loading docks, which the terminal operator indicated may currently be used to marshal up to six rail cars per week. The rail spurs on the MRT facility are operated by the TRRA, a local short-line service.

Figure 5.30 - Images of MRT Current Conditions

Other structures within the MRT facility include the following:

- Two 67 foot-diameter tanks and a pump house to the north of the warehouse. The tanks are understood to have no containment.
- Two truck scales, parallel to the dock just south of the North Market Street entrance
- The office building (5,575 square foot footprint) located in the center of the site and provides a repair shop, break room, office and lavatory facilities.
- The northern warehouse (11,600 square foot) which is structurally unsound and not in use.
- An obsolete grain conveyer at the far end of the south dock

Figure 5.31 - Images of other MRT Structures

The remainder of the site holds scattered piles of salt and other bulk commodities, trailers and skips belonging to Grossman, and other miscellaneous equipment. The bulk commodities held at the north and central portions of the facility are in use and being drawing down over time. The piles of wood chips and coal located at the southern end of the site look to have been sitting on the site for an indefinite period based on the observation that, in some cases, the piles are covered by vegetative growth.

Figure 5.32 - Images of other MRT Current Conditions

ENTRANCES AND CIRCULATION

During the site visit, it was observed that limited, if any, security controls and circulation practices are in place at the MRT. The mix of traffic within the boundaries of the MRT constitutes operating equipment, trucks, and passenger vehicles. The vehicles dart around each other, cargo piles, equipment, and pooling water when delivering and moving cargo. In addition, since it is understood that secure access to the MRT is not controlled. On occasion, cyclists and pedestrians are known to wander onto the premises from the adjacent Riverfront Trail.

There are a total of six entrances to the MRT site. Five are through floodgates, and the sixth is over an existing floodwall. The entrances to the site (from south to north) include:

- a truck entrance at Chambers (floodgate);
- a truck entrance at Madison Street (floodgate, but not currently used because Madison is closed to through-traffic);
- the rail entrance between Clinton and Madison Streets (floodgate);
- a truck entrance at North Market Street (floodgate);
- the truck entrance parallel to the northern portion of the Grossman site over the top of the floodwall; and
- an entrance at Branch Street (floodgate).

The North Market Street gate is currently used as the facility's main entrance. It is directly across the street from the scales at the Grossman facility. Trucks carrying scrap travel between the facilities to bring scrap for export onto barges. Its location is not ideal due to the fact that it results in vehicles being "funneled" into the center of the yard, which under operating best-practices, would be left open to allow circulation and movement of cargo and equipment.

The alternative entrance that trucks are understood to currently use is that which brings vehicles up over the floodwall and then down into the facility towards the north dock. This access route is shared with the bike trail and it is understood there may be concerns about large volumes of heavy vehicles traversing the floodwall that could cause structural damage.

Figure 5.33 - Images of MRT Entrances

SITE CONSTRAINTS

There are a number of physical constraints. These may limit the facility's ability to handle cargo or influence the physical layout and operating plan.

- Floodwall gates. It is understood the flood wall cannot be altered due to Federal or other restrictions and ongoing investigations. The North Market Street gate has a height constraint because of the width, meaning the concrete wall spans across the top of the gates. The rail entrance and Madison Street entrance do not have the height restriction because the gates are narrower. As a result, it may not be feasible to handle certain types of large cargo at the MRT.
- Outfall. A new outfall is set to be constructed under the northern end of the property. To avoid corrosion, and also in consideration of weight constraints, no cargo, especially salt, should be stored above it.
- Run-off and pooling water. Run-off from the site into the river or pooling water within the site and the adverse environmental impacts need to be mitigated. There is an earthen barrier along the river's edge, but it is understood that run-off has been a concern in the past as run-off has drained over the dock to the river. Standing water throughout the site is saturated with salt and iron run-off. A containment facility needs to be considered as part of any storage plans.
- Site grade. Elevation throughout the site is uneven, which makes for a hazardous operating environment and also leads to inefficiencies in the staging and handling of cargo, in terms of utilization of land areas at the MRT facility. A detailed topographic survey of the MRT facility has been completed. Generally speaking, the northern portion of the facility is at a higher elevation. The portion along the floodwall between North Market Street and the entrance over the floodwall is below grade as compared to the rest of the facility. At present, this results in pooled water where vehicles were partially submerged at the time of the visit.

Principles for Best-Practice in Conceptual Planning

The design and operations of modern port facilities depends on a wide variety of factors, including the size of the facility, the types of vessels it serves, the types of cargoes it handles, and the modal mix of landside transportation. As a general principle, port facilities should be designed to incorporate best-practices that maximize efficiency of cargo-handling through the terminal, by incorporating aspects such as just-in-time delivery, for example. In other words, this governing principle amounts to goods for export or import being retained on-site for as short a period of time as possible, i.e., a port facility or terminal is not designed to be a place to store cargo. This enables the facility to realize the most value from often physically constrained waterfront property, by maximizing the handling and throughput capacities through rapid turnover of cargoes handled. Effective management of a port facility's backlands, or yard, particularly by efficiently utilizing storage areas by minimizing the dwell times of cargo, is thus a key objective for many operators.

Bulk and break-bulk cargo-handling operations have many facets that are unique to the commodity-handling characteristics of different cargo types. These all factor into land-use decisions. For low-value cargo, especially raw materials, the transportation cost (per unit measure of cargo, e.g., cost per ton) may represent a significant percentage of the total cost per unit measure of cargo. As a result, customers often prefer to stockpile materials at the port, and draw down from this "inventory" as needed, because re-handling and transferring the cargo multiple times is costly and rapidly erodes into (thin) profit margins. Conversely, if a port's agreement with the Operator does not have clauses and/or tariffs in place that are "punitive" to the practice of cargo storage on-site, this is in turn often exploited by the Operator as an alternative and incremental revenue source.

The majority of port activity takes place along the dock and there are few options for alternative use within a facility beyond storing cargo. Some bulk and break-bulk goods require additional handling for redistribution. These activities typically take place in transit sheds where the pallets, bags or other forms of packaging are disassembled and reloaded into trucks with a few days' turnaround.

The basic principle applied in developing the physical lay-

outs for the MRT facility, as presented herein, is that the terminal is arranged to ensure the efficient storage and handling of cargo, the safe and efficient movement of cargo-handling equipment and vehicles, and the creation of a safe environment for workers. As such, an open staging area at center of terminal allows for efficient and controlled access to the berth, as well as movement between storage areas. Additionally, the designation and enforcement of on-terminal circulation routes minimizes the likelihood of accidents and reduces congestion. Finally, commodities are stored in clearly designated areas and are separated to prevent contamination. When not stored within a permanent structure, covering of commodity stockpiles and storage within defined pads with containment prevents run-off and contamination of the surrounding environment.

CAPACITY ASSESSMENT

In assessing the capacity of the MRT facility, it is noted that estimating a definitive terminal capacity is challenging due to the myriad factors that play into calculating it. For a multi-commodity and common-user bulk and break-bulk facility especially, there is no such thing as a defined capacity figure. Rather, the capacity is generally described as a range that is contingent upon the cargo mix being handled and the yard management practices in place. Any capacity figure for the MRT facility must therefore be considered both in terms of the yard capacity, i.e. the volume that can be handled and stored within the yard, and the berth capacity, i.e., the volume that can be moved over the dock. Ultimately, one of these two will act as a constraint upon the other, and as such, the lower of the yard and berth capacity will serve as the maximum practical capacity (MPC) of the MRT facility.

Given the fact that the current operations at the MRT facility are not considered to be reflective of efficient best-practices for bulk and break-bulk river terminals, the capacities for the berth and yard at the MRT facility that are presented below with discussion.

YARD CAPACITY

Allowing for approximately 125,000 square feet to be maintained in the center of the terminal for a staging area and for designated circulation routes within the terminal, the MRT facility is estimated to have approximately 600,000 square feet of yard available for commodity storage. Depending on commodity, or mix of commodities, under consideration, the aggregate volume that can be handled within the area of the MRT facility that is designated as the yard will vary. To put this in context, calculations were done to determine the theoretical maximum capacity of the MRT facility, in case it singularly accommodated each of the commodities currently handled, or projected to be handled in the future. A number of factors influence this value, including the dwell time, the stowage factor, the average stacking height, the angle of repose, and a peaking factor, which are defined as follows:

- Dwell Time: The average number of days a commodity stays on-site at the port.
- Stowage Factor: The cubic feet required to hold 1 ton of the commodity.
- Average Stacking Height: The average height at which a commodity it stacked or stored.
- Angle of Repose: The maximum angle at which granular bulk commodities, e.g., salt, coal, can be stored as an open stockpile.
- Peaking Factor: The maximum difference between the average periodic (weekly or monthly) cargo volume and peak cargo volume due to seasonal fluctuations. For example, ports handling manufactured goods typically realize peaks in the period before the Christmas holiday season as stores stock up for anticipated increased consumer activity.

The calculations used to determine spatial allocations are listed below:

Calculations for each Commodity:

- Average Number of Commodity Turnovers Per Annum = 365/Average Dwell Time
- Holding capacity = (Non-Containerized Ratio (x) Annual Volume) / Number of Turnovers
- Net Holding Volume = Holding Capacity * Stowage Factor
- Gross Holding Volume = 1.2 * Net Holding Volume
- Average Stacking Area = Gross Holding Volume/Average Stacking Height
- Average Storage Area = Average Stacking Area (x) 1.4
- Area Including Peaking Factor = Average Storage Area (x) Peaking Factor

The importance of efficient handling is readily apparent when the potential volumes are compared against dwell times for the same total of goods, e.g., a reduction in dwell time from 40 to 35 days results in an increase in capacity of 90,000 tons per annum for coal (717,000 tons – 627,000 tons).

As illustrated in the table below, given approximately 600,000 square feet of yard storage space, the theoretical yard capacity alone at the MRT facility could vary from 807,000 tons per year for other commodities to 1,548,000 tons for grain and oilseeds if the yard were dedicated to the storage of a single commodity with a dwell time of five days.

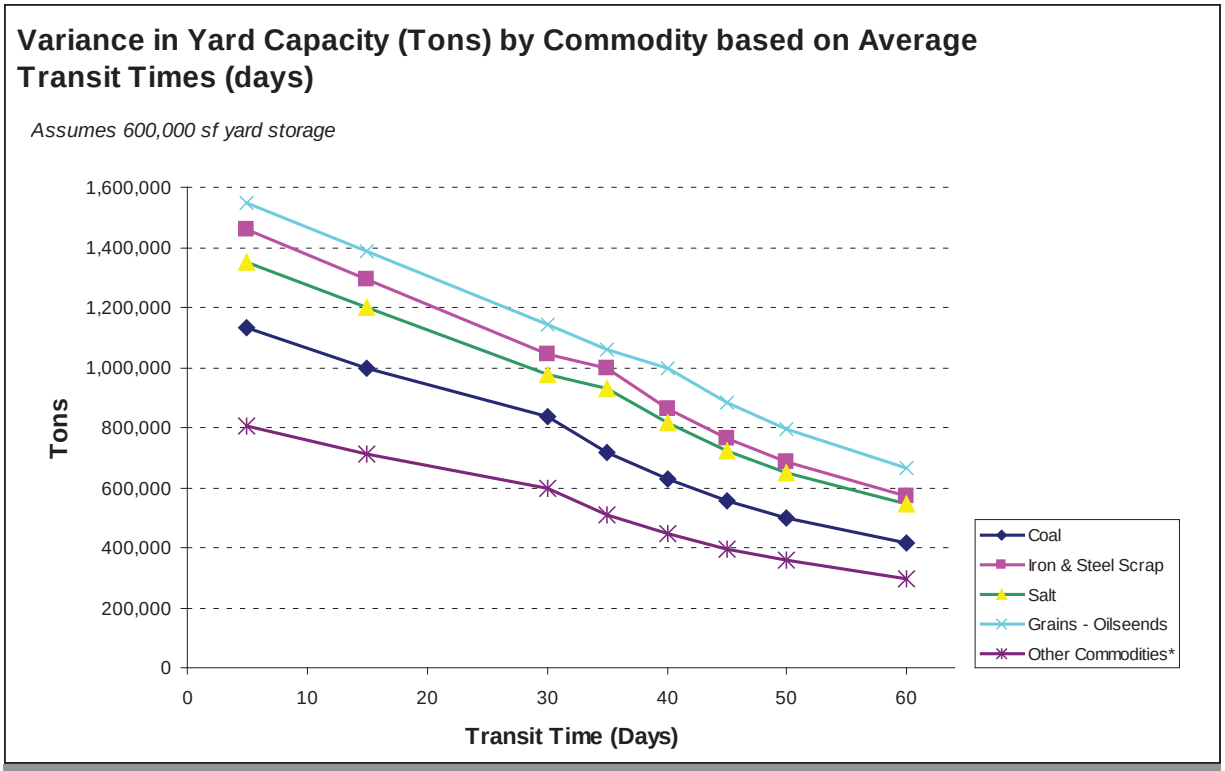


Table 5.7 - Variance in Yard Capacity by Commodity Based on Average Transit Times

BERTH CAPACITY

The other approach to calculating the capacity of the MRT facility is to assess the maximum volume that could be handled across the available berth length, which will be 2,000 linear feet upon completion of the new dock.

The table on the following page outlines the calculation of the berth capacity for the MRT facility, on the basis of current conditions, industry practices and an assessment of the balance between these factors versus the magnitude of capital investment required to undertake a significant reconfiguration of the MRT facility.

As such, the capacity calculations suggest that the MRT facility should be capable of handling nearly 2 million tons per annum. The calculations indicate that, solely on the basis of the available berthing length of 2,000 linear feet, the MRT facility could potentially be able to handle nearly 4 million tons per annum. However, given the fact that the current operator supposedly only has 2 cranes on site, the maximum practical throughput capacity that these cranes could deliver has been estimated at just less than 2 million tons, and therefore the MRT facility is considered to be constrained by crane capacity.

In order to maximize the utilization of the berth, in terms of its maximum theoretical throughput capacity of nearly 4 million tons passing over the berth, it would be necessary to invest in 2 additional cranes and the associated on-terminal equipment. Based on current market prices, and depending on the specific configuration of these additional cranes and on-terminal equipment, it is estimated that this additional investment could amount to between $6 million to $8 million. Since the projected market potential does not suggest the likelihood of an additional 2 million tons of cargo in upside potential for the MRT facility, under the high scenario, it is recommended that any capital investment in additional cranes and on-terminal equipment should at least be deferred in the near to medium term.

It is important to note a difference in methodology between the way the City of St. Louis calculates throughout and the methodology employed in port planning for operational analyses. It is understood that the City of St. Louis reports the total annual throughput as the combined total of all inbound and outbound cargo coming to the MRT facility. Inbound in this case is defined as all cargo arriving at the facility (barge, truck and rail) while outbound is defined as all cargo leaving the facility (barge, truck, and rail). For berth capacity planning purposes, inbound and outbound would only capture the component handled by barge because the capacity assessment is solely concerned with the single move over the dock. Thus the 2 million tons per annum calculated above would translate to 4 million tons per annum based on the City's reporting methodology. Similarly, the maximum theoretical throughput capacity of 4 million tons would equate to 8 million tons under the City's definition.

One other factor that could alter berth capacity would be the addition of a conveyor. Given the projected volume and the required capital costs, this scenario is not considered likely, but depending upon a future Operator(s)' business plans, such a potential might arise in discussions between the City and interested parties. A conveyor would

need to be located at either end of the berth. The specific capacity would be dictated by the particular conveyor installed which in turn would depend upon the demand and commodity type.

MRT Facility Maximum Berth Capacity (Throughput tonnage over the dock)			
Parameter	**Value**	**Units**	**Remarks**
Total Berth Length	2,000	ft	
Maximum Allowable Berth Occupancy	70%		Based on zero waiting time for barges and 9 berths
Berth Operating Days per Year	246	days	Based on 5 working days (Monday thru Friday) per week and 14 public holidays
Berth Operating Hours per Day	12	hrs	Average based on 2 shifts (lack of on-terminal lighting means no night operations and shorter operating hours in winter)
Average Barge Length	200	ft	Based on average barge dimensions from USACE data
Average Exchange per Barge	1,500	tons	Based on average barge capacity from USACE data
Net Crane Capacity per Lift	40	tons	Based on on-terminal equipment, industry averages and allowance for efficiency
Gross Operational Crane Productivity	12	moves/hr	Based on on-terminal equipment and industry averages (excluding hatch cover moves and miscellaneous)
Number of Cranes Working per Barge	1	ea.	Based on on-terminal equipment and industry averages
Crane Efficiency During Barge Unloading	60%		Based on on-terminal equipment and industry averages
Crane Efficiency During Barge Loading	80%		Based on on-terminal equipment and industry averages
Inbound Cargo Volume Percentage (unloaded)	60%		Based on volume forecast
Outbound Cargo Volume Percentage (loaded)	40%		Based on volume forecast
Total Terminal Crane Productivity	24	mv/hr	
Required Berth Length per Barge (length + 10%)	220	ft	10% allowance for tie-up clearances and mooring lines
Maximum Berths Available	9	nos.	
Number of Cranes on Terminal	2	nos.	Based on existing operator's equipment
Gross Crane Hours per Barge	3.44	hrs	Net hours + 10% for hatch cover moves and miscellaneous
Resulting Barge Service Time	5.06	hrs	Weighted-average of crane efficiency during loading and unloading
Gross Berth Time (= net + 2 hr)	7.06	hrs	Based on industry average times for pre-berthing, tying up and untying of 2 hours per barge
Maximum Barges per Year	2,636	nos.	
Maximum Berth Hours per Year	18,598	hrs	
Maximum Effective Crane Hours per Year	4,015	hrs	
Theoretical Maximum Annual Barge Throughput Over the Berth	3,954,049	tons	
Theoretical Maximum Annual Crane Capacity	1,927,066	tons	
Maximum Throughput Tonnage Over the Berth	**1,927,066**	**tons**	**The terminal capacity is constrained by the number of cranes**
Quay-line Performance	964	ton/ft	

Table 5.8 - St. Louis Municipal River Terminal Conceptual Planning Draft Report

Conceptual Operating Plans

A number of common principles and general assumptions were made in developing preliminary conceptual operating plans for the MRT. All of the layouts depict the facility in 2030 to illustrate the ability to handle forecast cargo volumes. The following recommendations and considerations apply to all of the conceptual operating plans.

- Given the river conditions at the MRT, the facility will continue to service barges.
- With the exception of the south warehouse, it is recommended that all other existing structures at the MRT be razed.
  - Studies to-date have not looked at asbestos abatement issues, which given the age of the buildings is highly likely and will result in additional costs.
  - Similarly, contamination from the on-site liquid tanks, which are understood to have been used for the storage of caustics without adequate containment, will highly likely require mitigation, which once again will result in additional costs.
- The south warehouse not only offers use for commodities that may require covered storage, but it could also accommodate project cargo. It is therefore recommended that it be retained. If needs dictate otherwise, an operator might choose to raze it or construct an alternative structure at a later time.
- It is recommended that the entire MRT facility be brought to grade. A two-tier approach is believed to be most realistic. The elevation against the back wall needs to be raised to grade with the central and southern parts of the facility. The gradient to the north end would be smoothed to lessen the incline and make movement of cargo-bearing trucks safer. Ultimately, this would significantly increase the usable yard area and also improve site drainage and catchment. This represents a capital expenditure that might be phased. In the near-term, operations and activities could concentrate in the central and southern portion of the facility with the yard area expanding at a later point to meet future storage demand.
- It is recommended that field trailers be used for on-site offices. Demolition of the existing office building removes an impediment to efficient traffic circulation on the site. The use of field trailers would provide the required facilities at a much lower cost. These could easily be located against the floodwall out of the way of operations.
- In the near-term, it is recommended that North Market Street remain the primary operational entrance. It is also recommended that access to the site be more restricted for purposes of ensuring safety and security. Gate houses are depicted in the concept plans for this reason. Over the longer-term, if the site grade was improved and the radius of the floodwall approach road altered, Branch Street might offer an alternative entrance to help manage on and off-terminal congestion.
- As noted in the preceding section, it is recommended that the central area is maintained open for circulation and staging of cargoes.

Conceptual Plan A: Base Case Operating Plan (No On-Dock Rail)

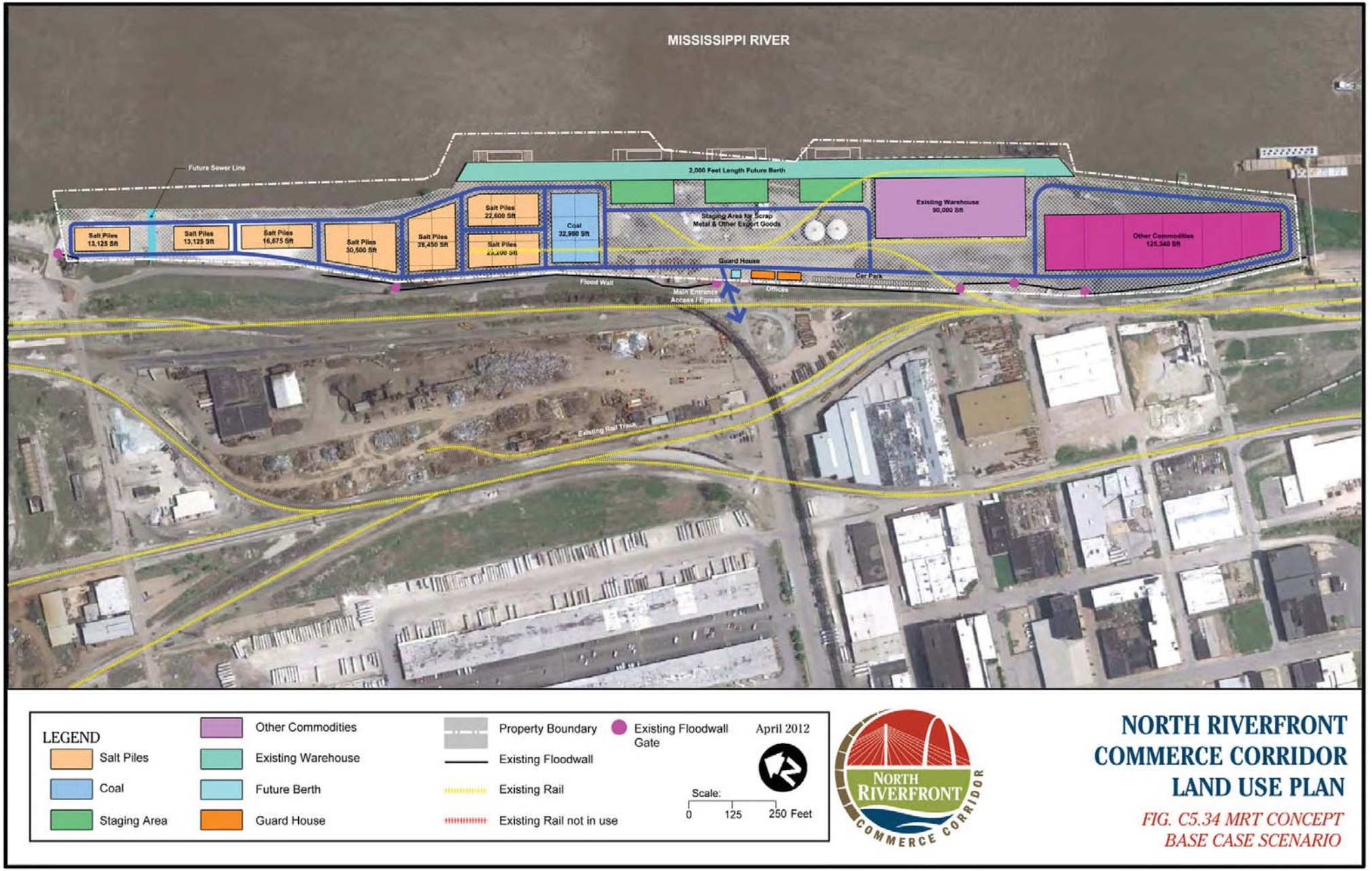
Conceptual Plan A depicts the MRT facility in a layout that would allow an Operator to efficiently handle the base case 2030 cargo forecast. The actual commodities handled and stored will depend upon the Operator's business plan and local demand. However, the general principles described here can be interchanged with other cargo types. The central area is maintained open, with designated staging areas at the berth for barge loading or unloading directly adjacent to the crane. Roadways are demarcated to provide circulation around the facility and between the piles.

The storage requirements for each commodity are shown in the table below. The storage area requirements used in developing the plan are highlighted in green. An explanation of assumed operational practices is as follows:

- *Scrap:* The Grossman facility is expected to remain in its current location. Scrap will continue to be transported to a staging area for direct loading onto a barge for export down the river.
- *Coal:* Coal is understood to be brought in to serve local manufacturing requirements and arrives as-needed, moving relatively quickly off the terminal.
- *Salt:* Salt storage can remain at the northern portion of the site. Typical operations have the transportation department draw-down on the stockpile as the salt is transferred to regional storage facilities for use and application. Good yard management principles would look to maintain a cycle such that the pile is replenished on a monthly cycle.
- *Other commodities:* More than adequate storage space is available between the south warehouse and the land at the southern end of the facility.

The field office and parking are moved out of the way of handling equipment and trucks to a site along the floodwall. The existing right-of-way for the short-line rail service is preserved to allow for delivery of cargo by rail, or for the rail operator's staging of rail cars.

At present, some multi-modal cargo transfer occurs at the MRT facility between truck and rail. Continued activity could be supported by this plan within the central area. However, given the configuration of the site and the constraints that such activities impose on rail and adverse impacts on operations, an Operator might choose to move such activities outside the terminal boundaries.



NORTH RIVERFRONT COMMERCE CORRIDOR LAND USE PLAN

FIG. C5.34 MRT CONCEPT BASE CASE SCENARIO

Base Case: 2030			Approximate Storage Area (SF) Required based on Average Transit Times (days)						
Potential Commodity	MRT Volume (Tons)	Assumed Handling & Terminal Requirements	(Staging for Direct loading) 1	5	15	30	45	60	120 (approx.)
Coal	83,328	Imported. Trucked to local manufacturing plants.	2,050	10,200	30,500	61,100	92,000	122,500	244,200
Iron & Steel Scrap	236,166	Exported. Trucked to dock for barge loading. No storage.	4,100	21,000	6,200	124,000	185,000	246,100	492,200
Salt	404,182	Imported. Trucked out. Stored on terminal	7,500	112,000	113,000	224,200	337,000	448,500	897,000
Grains - Oilseends	Excluded from this scenario	Exported. Rail to dock for barge loading due to economics of transport.							
*Other Commodities**	190,292	Both imported and exported by barge, then transported by truck. Some storage on terminal.	6,400	32,000	96,000	192,000	288,000	384,000	767,400
TOTAL:	**913,968**		**20,050**	**175,200**	**245,700**	**601,300**	**902,000**	**1,201,100**	**2,400,800**

Note: Assumptions used for conceptual lay-out highlighted in green

Table 5.9 - Storage Area Assumptions for Conceptual Plan A

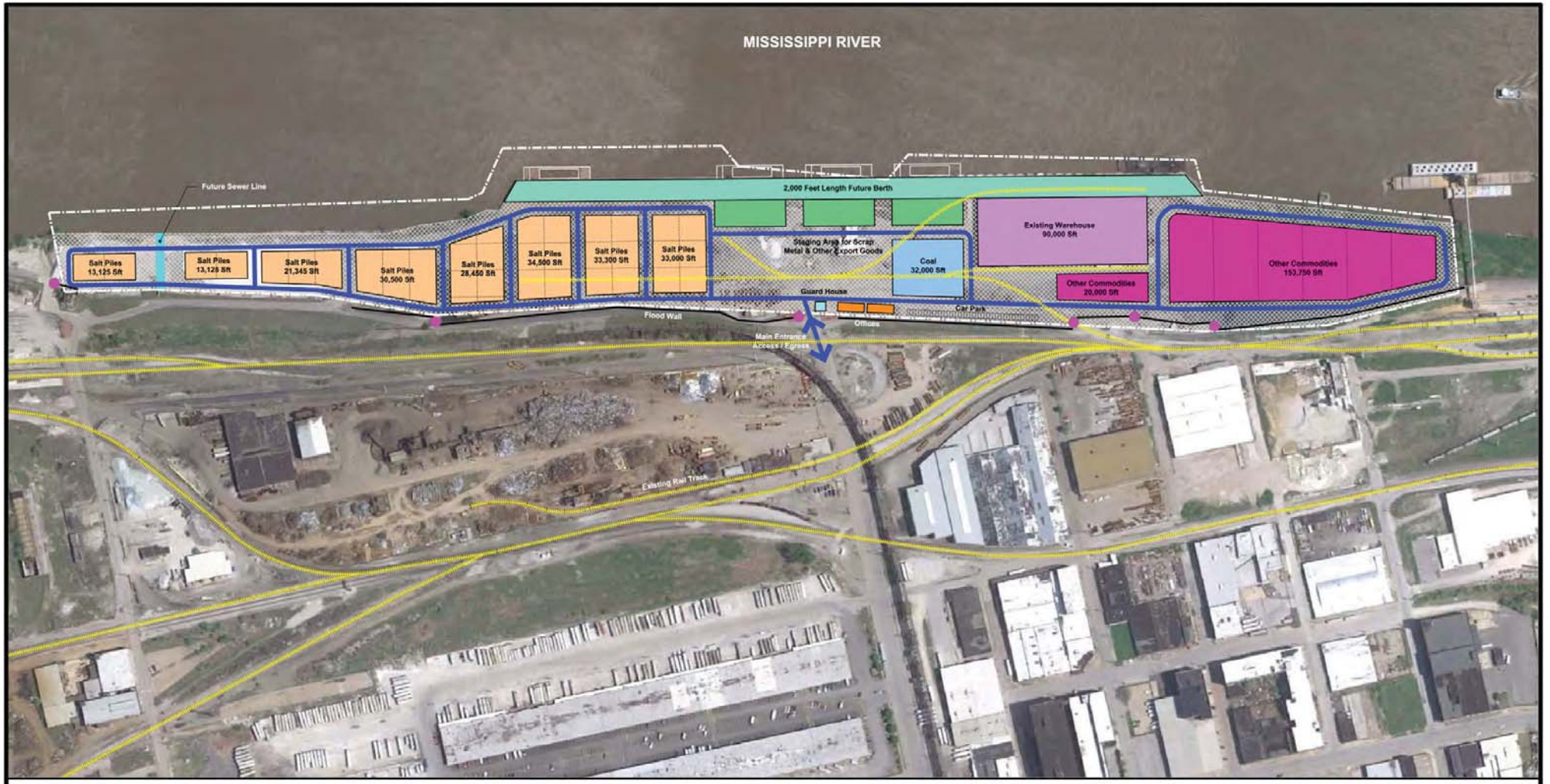
Conceptual Plan B: Base Case Operating Plan (On-Dock Rail)

Conceptual Plan B depicts the MRT facility in a layout similar to that of A, but introduces an expansion of on-dock rail service. This would require additional investment and a change to the current operating procedures, to allow for the marshalling of railcars to/from the site with minimal interference to existing operations. As such, a preliminary layout of additional track has been included, which would allow the short-line rail operator to marshal trains during off-peak hours at night. It is envisaged that this plan could allow for the Operator to expand into markets not currently served by the MRT such as grain or oilseeds.

Base Case: 2030			Approximate Storage Area (SF) Required based on Average Transit Times (days)						
Potential Commodity	MRT Volume (Tons)	Assumed Handling & Terminal Requirements	(Staging for Direct loading) 1	5	15	30	45	60	120 (approx.)
Coal	83,328	Imported. Trucked to local manufacturing plants.	2,050	10,200	30,500	61,100	92,000	122,500	244,200
Iron & Steel Scrap	236,166	Exported. Trucked to dock for barge loading. No storage.	4,100	21,000	6,200	124,000	185,000	246,100	492,200
Salt	404,182	Imported. Trucked out. Stored on terminal	7,500	112,000	113,000	224,200	337,000	448,500	897,000
Grains - Oilseends	127,896	Exported. Rail to dock for barge loading due to economics of transport.	Not applicable – the rail cars would provide the required storage capacity						
*Other Commodities**	190,292	Both imported and exported by barge, then transported by truck. Some storage on terminal.	6,400	32,000	96,000	192,000	288,000	384,000	767,400
TOTAL:	**1,041,864**		**20,050**	**175,200**	**245,700**	**601,300**	**902,000**	**1,201,100**	**2,400,800**

Note: Assumptions used for conceptual lay-out highlighted in green

Table 5.10 - Storage Area Assumptions for Conceptual Plan B



LEGEND

- Salt Piles
- Coal
- Staging Area
- Other Commodities
- Existing Warehouse
- Future Berth
- Guard House
- Property Boundary
- Existing Floodwall
- Existing Rail
- Existing Rail not in use
- Existing Floodwall Gate

April 2012

Scale: 0 125 250 Feet

NORTH RIVERFRONT COMMERCE CORRIDOR

NORTH RIVERFRONT COMMERCE CORRIDOR LAND USE PLAN

FIG. 5.35 MRT CONCEPT BASE CASE SCENARIO ON DOCK RAIL

Conceptual Plan C: High Case Operating Plan

Conceptual Plan C depicts the MRT facility in a layout designed to accommodate the 2030 high case. As the volumes increase, available yard capacity becomes more constrained. Storage piles would be required toward the center of the yard. Although the staging areas and roadways are preserved, the central portion of the yard would grow more crowded and congested. While the forecast volumes can be accommodated, it would be expected that an Operator would become more aggressive in requiring users to transfer cargo off the terminal, likely increasing storage fees to incentivize shorter dwell times.

High Case: 2030			Approximate Storage Area (SF) Required based on Average Transit Times (days) of						
Potential Commodity	**MRT Volume (Tons)**	**Assumed Handling & Terminal Requirements**	**(Staging for Direct loading) 1**	**5**	**15**	**30**	**45**	**60**	**120 (approx.)**
Coal	112,623	Imported. Trucked to local manufacturing plants.	2,750	13,600	40,600	40,600	123,900	165,200	331,000
Iron & Steel Scrap	354,405	Exported. Trucked to dock for barge loading. No storage.	6,200	31,000	93,000	185,900	278,800	371,800	734,500
Salt	547,351	Imported. Trucked out. Stored on terminal	10,100	50,600	151,700	303,900	455,800	607,800	1,215,500
Grain-Oilseeds	310,843	Exported. Rail to dock for barge loading due to economics of transport.	Not applicable – rail cars (not shown in layout) would provide the required storage capacity.						
*Other Commodities**	292,045	Both imported and exported by barge, then transported by truck. Some storage on terminal.	9,900	49,200	147,500	294,900	442,300	589,700	1,179,400
TOTAL	**1,617,267**		**28,950**	**144,400**	**432,800**	**825,300**	**1,300,800**	**1,734,500**	**3,460,400**

Note: Assumptions used for conceptual lay-out highlighted in green

Table 5.11 - Storage Area Assumptions for Conceptual Plan C

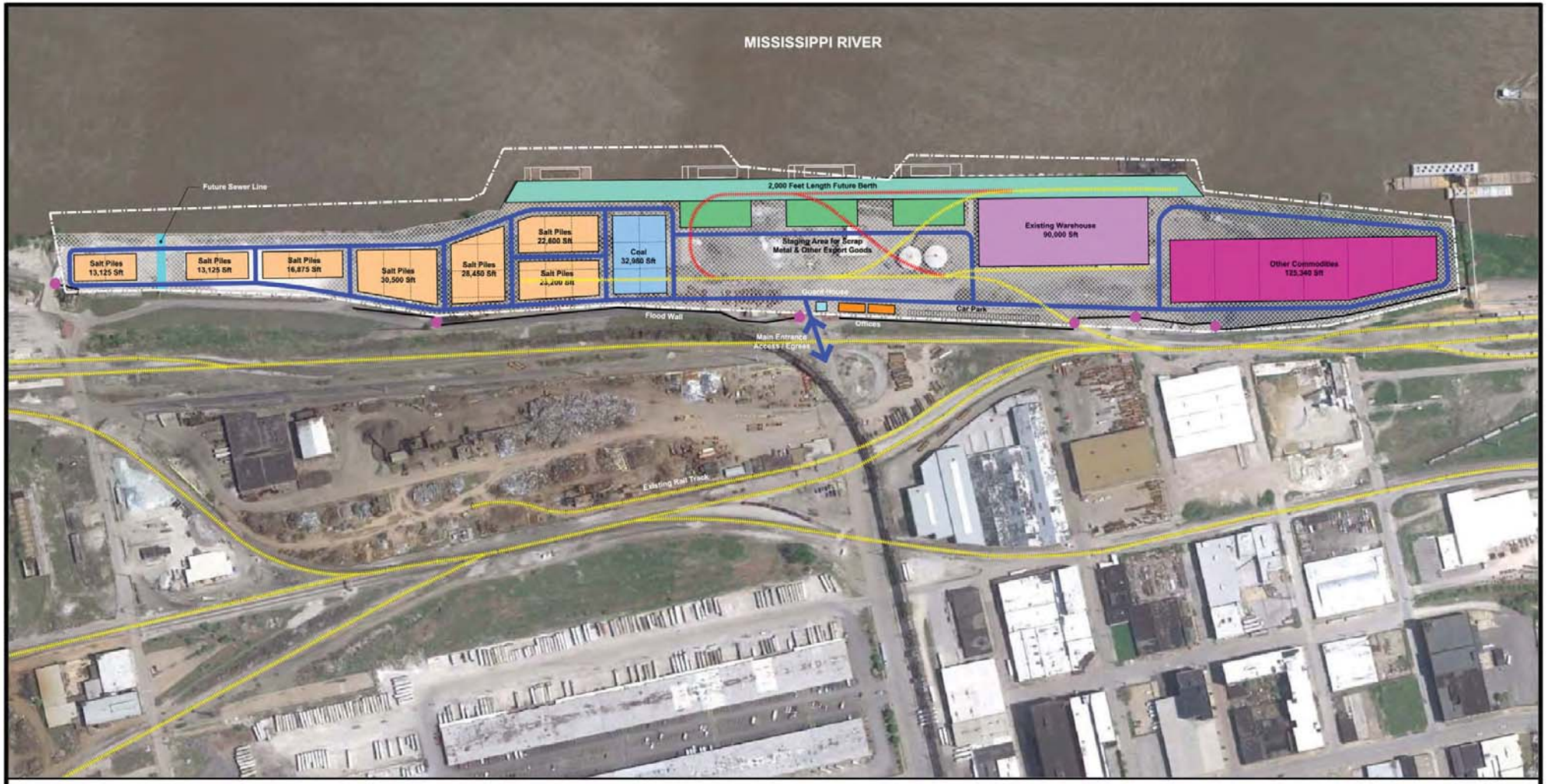
ADJACENT PARCELS

It is understood that the City has a number of parcels adjacent to the MRT that might afford complimentary uses in the future, whether augmenting capacity or providing alternative, but related uses. These include a 157,000 square foot warehouse at 5 Clinton Street across from the North Market Street entrance, two adjacent parcels totalling approximately 120,000 square feet along Tyler Street between 1st Street and the St. Louis Riverfront Trail, and two parcels adjacent to the north of the MRT facility totalling approximately 200,000 square feet along the river. These parcels combine for total of approximately 500,000 square feet.

Depending upon the cargo types and volumes being handled, these adjacent parcels might afford additional storage space at some point in the future. Based on the illustrative yard capacity calculations outlined previously, these parcels could provide up to an additional 75 percent of yard storage capacity. The facility would still be constrained by its berth capacity as an upper limit to handling volumes.

As an example of a potential re-use, the Clinton Street warehouse is served by both an external rail spur and a spur that directly enters the building. Depending upon an Operator's activities and customers' needs, the warehouse might provide an alternative venue for multi-modal transfer outside the MRT boundaries.

In the near-term, it is unlikely that an Operator would seek the additional acreage, given current throughput volumes. Over the longer-term, and closer to the time when the existing leases are expiring, an Operator might have more interest. The Operator would be expected to analyze the trade-offs between his potential costs (additional lease payment, transportation costs to move cargo to and from the sites, and required capital investment for site improvements) and the additional revenue that might be generated. A capacity-constrained Operator might find it more profitable to pursue yard management strategies and enforce shorter cargo dwell times as opposed to acquiring additional acreage.



LEGEND

- Salt Piles
- Coal
- Staging Area
- Other Commodities
- Existing Warehouse
- Future Berth
- Guard House
- Property Boundary
- Existing Floodwall
- Existing Rail
- Existing Rail not in use
- Existing Floodwall Gate

April 2012

Scale: 0 125 250 Feet

NORTH RIVERFRONT COMMERCE CORRIDOR

NORTH RIVERFRONT COMMERCE CORRIDOR LAND USE PLAN

FIG. 5.36 MRT CONCEPT HIGH CASE SCENARIO

PREFERRED OPERATING PLAN

The preferred operating plan will necessarily depend upon the future Operator's business plan, the availability of capital to invest in upgrading the facility, and ultimately the market and customers the Operator expects to serve. Both the City and the Operator need to weigh any investments against the revenue stream and debt service required for the new berth as well as any additional capital projects.

The new berth will significantly improve the MRT facility's ability to safely and efficiently handle cargo. As compared to the operating potential with the existing berth, MRT will be able to offer more efficient staging and marshalling of more barges once construction of the new dock is complete. This may increase its attractiveness to potential users. In addition, this enhanced efficiency equates to a greater upside capacity potential in terms of volume. This would be expected to make the facility more attractive to potential Operators. As a differentiator from competitor terminals however, the new berth may bring little in terms of unique advantage. The depth at MRT can be a constraint during certain seasons and the length of the new dock is not believed to be significantly greater than that of other facilities within the region.

As part of its discussions with potential Operators, the City should consider developing a phased approach to staged improvements that are timed to meet growing demand for space and handling capacity. Given the small percentage of cargo currently handled by rail, unless the Operator has customers locked in who are willing to pay for the service, the investment required to introduce such capability would be better spent on alternative near-term improvements. Opening the central yard area in order to take full advantage of the new berth is a priority action. This would include razing the existing structures and clearing the site of abandoned cargo, debris and non-essential equipment. Grading the central portion of the facility to remove the standing water against the Flood Wall and to reclaim the land for productive yard acreage could be a next step. Over a set time-frame, the City and Operator would work together towards a layout reflective of Conceptual Plan A. Were business to grow, and customer demand created, on-dock rail might be introduced later along the lines of Conceptual Plan B.

Following feedback from and discussions with the City of St. Louis, a hybrid or final recommended operating plan may be developed as part of the next phases of the Plan.

MRT Circulation Analysis

As part of the circulation analysis, the project team conducted an assessment of existing and future road needs for the MRT based on a field visit and discussion with key stakeholders.

EXISTING ACCESS TO THE MRT

Today, the primary route and entrance to the MRT is North Market Street. Trucks access North Market Street by way of North Broadway Street or I-70. Other major traffic generators along North Market Street include St. Louis Produce Market, a regional wholesale/distribution center for food products and Grossman, a major recycling operation. These uses generate a significant amount of truck traffic and congestion within a small area.

FUTURE ACCESS TO THE MRT

As mentioned in the MRT options, North Market Street could remain the primary entrance to the Terminal, however, alternative access could be provided from I-70 through improvements to the slip ramp system. During the study process, a potential interchange between Salisbury Street and Madison Street was considered. A new interchange and consolidated access along the existing frontage road system has the potential to significantly improve safety and mobility. However, any consideration of a change in access along I-70 will need to be studied through a systems analysis review, alternatives analysis, AJR and a significant environmental review process.

LOCAL STREET CONNECTIVITY

A significant number of local streets within this area are disconnected due to the presence of rail lines and/or to accommodate large properties with intensive uses. The City should proactively work with the railroads and property owners to identify strategic locations that are not developed or are presently underutilized where streets can be re-platted and extended to connect the existing network. This will improve circulation and reduce congestion through the area. One example is Monroe Street north of 1st Street. The area within the vacated portion of this street is used for overflow truck parking and does not contain any permanent structures or improvements. This restored connection could provide relief for trucks existing out of the MRT and adjacent properties.

MRT Utility Analysis

The MRT is comprised of numerous industrial parcels existing north of the proposed Mississippi River Bridge along a corridor between the river and I-70/North Broadway. The MRT is owned by the City of St. Louis and currently leased to and operated by Beelman River Terminals, Inc. It includes 27 acres of open storage area, twenty three of which are asphalt-surfaced and the remainder gravel-surfaced.

The MRT is the only public, general purpose dock on the Missouri side of the PMSL. It has two public docks and storage facilities. A total of eight barges can be berthed at the North and South Wharves. After completion of construction that is currently underway to join these wharves, the MRT's capacity will be doubled.

The MRT handles receipt and shipment of general cargo and heavy-lift dry-bulk commodities, including grain, coke, coal, sand, scrap metal, various mineral ores, caustic soda, and sundry liquid-bulk commodities. The MRT has direct access to TRAA, a local short-line railroad adjacent to Interstate 70 and the new MRB that serves the entire PMSL and connects with Burlington Northern Santa Fe and Norfolk Southern Railway.

Three building structures currently exist within the boundaries of the MRT:

1. A two-story office building – Its first floor contains a mechanical shop (garage), a bathing house and an unused weigh station, and its second floor contains executive offices and restrooms.
2. A dimly lit 90,000 square-foot (south) warehouse that is currently used to store barged items such as bauxite, sand, salt, steel coils, and calcium alumnates.
3. A dilapidated 12,000 square-foot (north) warehouse.

Existing MRT utilities are illustrated in *Figures 5.37*, *5.38*, *5.39* and *5.40* and discussed on the following pages.

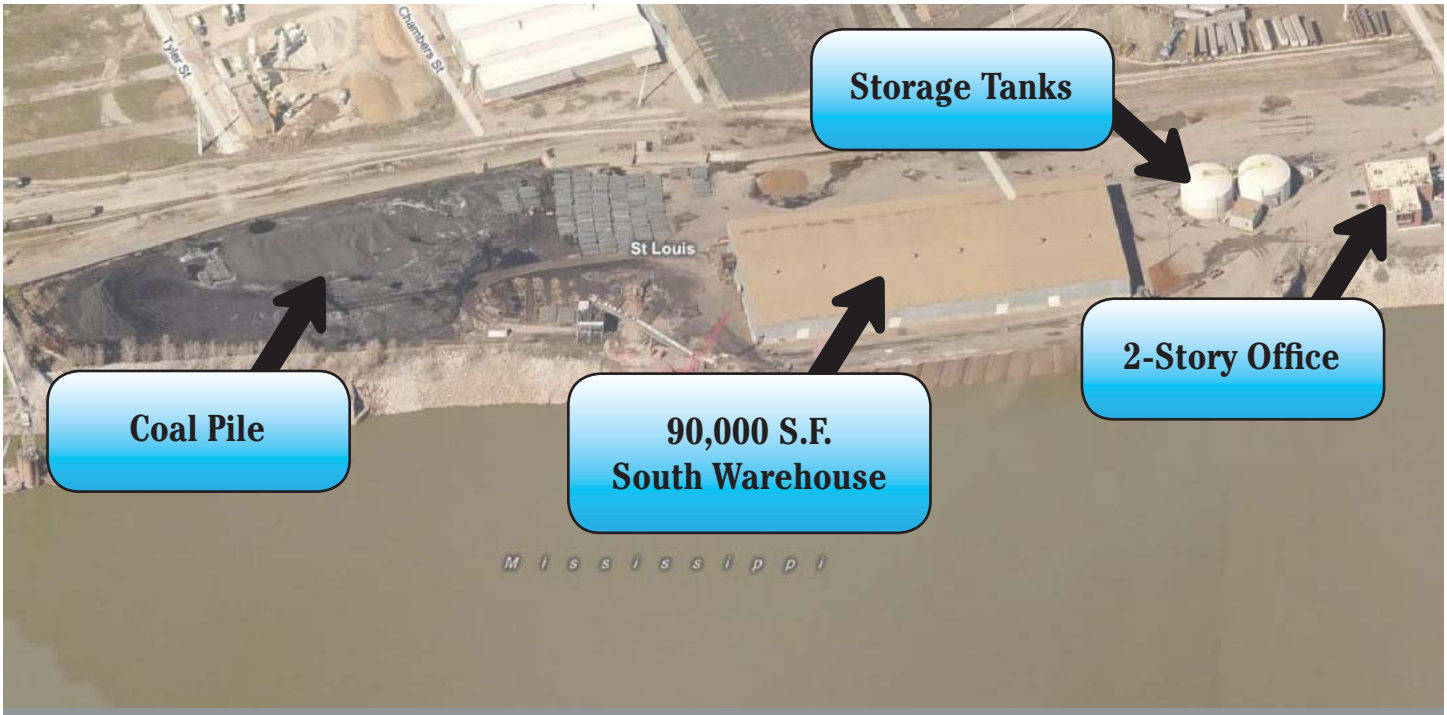
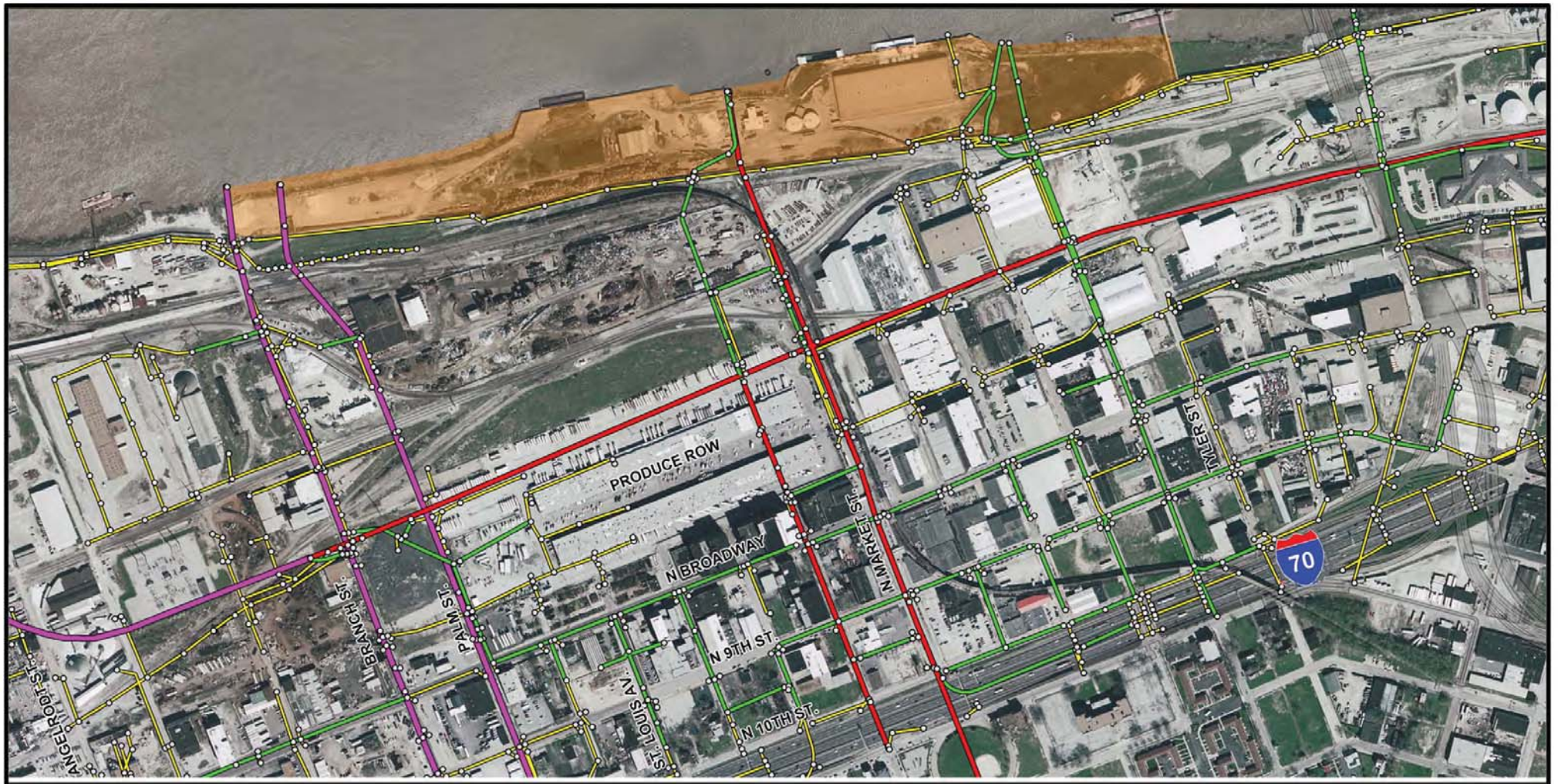


Figure 5.41 - MRT South Wharf

Figure 5.42 - MRT North Wharf



LEGEND

PIPE SIZES OF COMBINED SEWER

- 0" to 30"
- 31" to 60"
- 61" to 100"
- 100" and Above

Sewer Structure

Municipal River Terminal (MRT)

April 2012

Scale: 0 250 500 Feet

NORTH RIVERFRONT COMMERCE CORRIDOR

NORTH RIVERFRONT COMMERCE CORRIDOR LAND USE PLAN

FIG. 5.37 SEWER LINE SIZES

LEGEND

- 0" to 3"
- 4" to 6"
- 6" to 19"
- 20" and Above
- Unknown
- Municipal River Terminal (MRT)

April 2012

Scale: 0 250 500 Feet

NORTH RIVERFRONT COMMERCE CORRIDOR

NORTH RIVERFRONT COMMERCE CORRIDOR LAND USE PLAN

FIG. 5.38 GAS SERVICE LINES

LEGEND

- Overhead Electric Line
- 4" to 6"
- 6" to 19"
- Municipal River Terminal (MRT)

April 2012

Scale: 0 250 500 Feet

NORTH RIVERFRONT COMMERCE CORRIDOR

NORTH RIVERFRONT COMMERCE CORRIDOR LAND USE PLAN

FIG. 5.39 ELECTRIC SERVICE LINES

LEGEND

- 20" Water Pipe
- 12" Water Pipe
- 8" Water Pipe
- 6" Water Pipe
- Pipe Size Unknown
- Municipal River Terminal (MRT)

April 2012

Scale: 0 250 500 Feet

NORTH RIVERFRONT COMMERCE CORRIDOR

NORTH RIVERFRONT COMMERCE CORRIDOR LAND USE PLAN

FIG. 5.40 WATER SERVICE PIPES

Figure 5.43 - MSD's Outfall Structures at North Wharf

DRAINAGE/ WASTEWATER

Various public sewers and structures, including large concrete pipes, manholes, inlets, and combined sewer overflow (CSO) structures, exist within the MRT area. A subdrainage system that extends in a north-south direction, in parallel with the floodwall, connects to the CSOs that discharge into the Mississippi River. The CSO at Branch Street near the north wharf is collapsed and requires immediate attention. This area is currently unsafe for worker and equipment access.

The northern MRT area has been subjected to frequent stormwater ponding. The MRT area has had numerous other surface drainage and sewer challenges. Terminal Management has reported sewer backups and collapsed sewers. This ponding and the associated sewer backups have rendered the use of most of the restrooms in the two-story building impossible. Restrooms at the south warehouse have been replaced by portable sanitation units (Porta Potties).

A detailed analysis of the existing sewer system will be necessary to identify and correct the problems. Future work proposed in this area must be coordinated with MSD and the U.S. Army Corps of Engineers to ensure the integrity of the floodwall and floodgates.

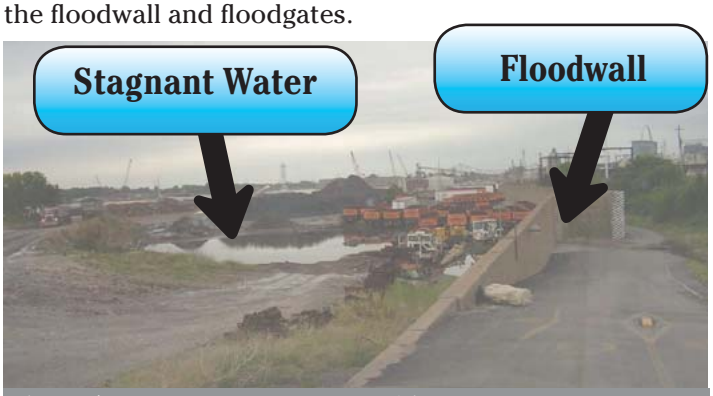


Figure 5.44 - Ponding at North Wharf Area

UTILITIES

Utilities in the MRT area including water, gas, electric, fiber optic, and telephone service are governed by the City of St. Louis Water Division, Laclede Gas Company, Ameren UE, City of St. Louis Communication Division, and AT&T, respectively.

City Water

Currently, domestic water and fire service is provided to the MRT by a 12-inch steel water main from North Market Street and a 6-inch steel water main from Madison Street.

The 12-inch steel main is reduced to an 8-inch line that serves the six fire hydrants within the MRT facility. Redevelopment of the area will require additional capacity for domestic water and fire service.

Gas

Two feeds currently provide gas service to the south warehouse and a service platform north of the two-story building structure. The feed from North Market Street is provided by a 4-inch steel line and the feed from Madison Street is provided by a 2-inch steel line. These are considered adequate for serving the current facility, but may require upgrading to serve any new facilities.

Electric

The facilities currently receiving electric service include a two-bay weigh station (11' x 70' each), a twenty-foot container that serves as office space for the weigh station, the three building structures, a service platform for trailers/ trucks, and storage tanks with their supporting structures. A power pole near the two-story building will need to be relocated to protect it from further damage by large trucks as they traverse the site.

Telecommunication
Existing overhead telephone cables between the facility (two-story building and the south warehouse) and south wharf will require burial to eliminate impacts to crane operation between the facility and south wharf.

OTHER GENERAL CONDITIONS
Buildings
In the two-story building, Air Conditioning (AC) units in the bathing house are not currently functioning, and windows in the mechanical shop (garage) are typically broken. In two of the four restrooms, one urinal and two hand-wash basins are currently not in working order. Most of the offices upstairs are in total disrepair, restrooms cannot be used, windows are broken or damaged, and most of the ceilings are caving in from recurring roof leaks. Extensive work will be required to transform this building into an operable facility. Renovation costs will be justifiable if the building can be leased to companies and organizations that will generate tax revenue for the City of St. Louis.

In the south warehouse, the sprinkler system, heating units, lighting, and AC units will require upgrading.

MRT Drainage and Flood Mitigation

The MRT is on the river side of the floodwall and is subject to Federal Emergency Management (FEMA) and US Army Corps of Engineers (USACE) regulations. Everything on the river side of the floodwall is located within the FEMA Floodway. Therefore, any construction within the MRT will need to show no impact (0.00 feet of increase) on Mississippi River floods. Typically, this means that throughout the site, there needs to be no reduction in the total area available for flood flows. FEMA requirements generally dictate that any fill placed below the 100-year in the area will need to be balanced with compensatory excavation. Areas blocked by new buildings below the 100-year flood elevation would also likely need to be compensated for somehow as well. It might be possible to build new structures on piers to allow flow underneath, to meet FEMA requirements.

Within the MRT, there is another significant constraint. The floodwall systems on both sides for the river are actually designed for events greater than the 100-year flood. Therefore, floodwall stakeholders (communities on both sides of the river, the USACE, and possibly the Missouri and Iowa DNRs) may require a no-rise design for the floodwall design event, which could be the 500-year flood or higher. This could raise the elevation of where no significant change in flow area could occur up to elevation 432 or higher.

The recently designed new Mississippi River Bridge does result in a slight increase (.03 to .05 feet) in 100 and 500-year flood elevations, the allowance of which is highly unusual. The importance of the new bridge to both states likely had much to do with the acceptance of that increase; getting that increased approved by both states and the USACE was a difficult process.
The following elevations (plus or minus a couple of tenths) provide flood elevations within the MRT:

- 10-year flood elevation varies from 418.6 at the downstream end to 419.2 at the upstream end of the site.
- 50-year flood elevation varies from 424.3 at the downstream end to 424.9 at the upstream end of the site.
- 100-year flood elevation varies from 426.5 at the downstream end to 427.1 at the upstream end of the site.
- 500-year flood elevation varies from 431.5 at the downstream end to 432.1 at the upstream end of the site.

Sustainable Design

In recent years sustainable design practices have emerged to become mainstream standards for site development, infrastructure and architecture. Many corporate and industrial tenants now have expectations or requirements that facilities will meet minimum criteria for sustainability. This reflects both a maturing attitude toward the environment as well as policy mandates that an increasing number of companies have adopted to meet "green" workplace goals. Likewise, municipalities are adopting policies to support private sector sustainable initiatives while making their own commitments to pursue sustainable measures.

In order to meet the expectations of increasingly sophisticated companies in the NRCC, the City of St. Louis has the opportunity to implement a variety of best practice sustainable design measures. Partnerships between property owners, tenants, utilities and public agencies are effective, and often necessary, to achieving the greatest benefits from these efforts.

Best Practice Case Studies

The movement toward adopting sustainable policies and programs in urban redevelopment is predominantly influenced by non-profit and professional organizations whose missions are to promote green development standards. While some of these organizations, such as the US Green Building Council, are more widely recognized for programs such as Leadership in Energy and Environmental Design (LEED©) there are other rating systems and guidelines for sustainable development that may have potential application and relevance to the NRCC.

Following are summaries of five sustainability initiatives or programs that pose opportunities for green development within the NRCC.

US GREEN BUILDING COUNCIL (USGBC) LEED-ND

The USGBC has been a pioneer in developing rating systems for green building practices, notably the Leadership in Energy and Environmental Design (LEED) certification program. In 2009 USGBC introduced the LEED for Neighborhood Development (LEED-ND) in order to emphasize "the site selection, design, and construction elements that bring buildings and infrastructure together into a neighborhood and relate the neighborhood to its landscape as well as its local and regional context." In short, whereas LEED certification focuses principally on individual buildings, LEED-ND is expanded to include projects at a neighborhood or community scale.

Certification criteria for LEED-ND include the following categories:

- Smart Location and Linkage
- Neighborhood Pattern and Design
- Green Infrastructure and Buildings
- Innovation and Design Process
- Regional Priority Credit

AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS (ASLA) SUSTAINABLE SITES INITIATIVE

ASLA modeled the Sustainable Sites Initiative: Guidelines and Performance Benchmarks in 2009 after the LEED certification system and under license with the USGBC. It is not intended to replace LEED certification, but rather, to foster a "transformation in land development and management practices that will bring the essential importance of ecosystem services to the forefront." Furthermore, the guiding tenant of the Initiative is that is that "any landscape, whether the site of a large subdivision, a shopping mall, a park, an abandoned rail yard, or a single home, holds the potential both to improve and to regenerate the natural benefits and services provided by ecosystems in their undeveloped state." A set of Guiding Principles provide direction for every aspect of site design and a list of Ecosystem Services defines natural conditions that the Initiative strives to protect or regenerate.

Certification criteria for Sustainable Sites Initiative include the following categories:

- Site Selection
- Pre-Design Assessment and Planning
- Site Design—Water
- Site Design—Soil and Vegetation
- Site Design—Materials Selection
- Site Design—Human Health and Well-Being
- Construction
- Operations and Maintenance
- Monitoring and Innovation

GREEN GUIDE FOR HEALTH CARE

Multiple organizations contributed to the preparation of the Green Guide for Health Care. As the name suggests, this sustainable design program was developed for health care facilities and was structured, in part, following LEED certification criteria. It is a self-certifying program that encourages organizations in the health care industry to evaluate their own facilities and operations to pursue a custom path toward sustainability appropriate to their specific needs, resources and mission. The Green Guide is "the health care sector's first quantifiable sustainable design toolkit integrating enhanced environmental and health principles and practices into the planning, design, construction, operations and maintenance of their facilities."

Although the NRCC is not home to major health care facilities that would typically utilize the Green Guide, there are aspects of this particular rating system that may offer sustainable design precedents for industrial campuses in

the area. In particular, the Green Guide specifies credits for both construction and operations:

- Construction criteria offers emphasis on long-term sustainability investments for owner-occupied facilities.
- Operations criteria offers both owners and tenants strategies for conducting business more sustainably and efficiently. Many of the industrial and commercial facilities in the NRCC will find operational similarities with health care facilities, such as materials handling, purchasing and environmental services.

Furthermore, for organizations which are unable to make a commitment to obtain third-party green certification, but are nonetheless interested in pursuing green improvements to their facilities, the Green Guide model for self-certification allows flexibility and an incremental approach.

Certification criteria for the Green Guide for Health Care include the following construction categories:

- Integrated Design
- Sustainable Sites
- Water Efficiency
- Energy and Atmosphere
- Materials and Resources
- Environmental Quality
- Innovation and Design Process

Certification criteria for the Green Guide for Health Care include the following operations categories:

- Integrated Operations and Education
- Sustainable Sites Management
- Transportation Operations
- Facilities Management
- Chemical Management
- Waste Management
- Environmental Services
- Food Service
- Environmentally Preferable Purchasing
- Innovation in Operation

INTERNATIONAL COUNCIL ON LOCAL ENVIRONMENTAL INITIATIVES (ICLEI) STAR COMMUNITY INDEX

At the community and regional scale, implementation of sustainable design solutions is most effective and impactful when there is a strong collaboration between the public and private sector. This helps to encourage greater participation of private and institutional organizations and while ensuring cooperation and support from public agencies. ICLEI fosters public-private partnerships by providing sustainable design resources, technical support and guidelines. Their mission is to "build, serve, and drive a movement of local governments to advance deep reductions in greenhouse gas emissions, execute clean energy solutions, and achieve tangible improvements in local sustainability." ICLEI has several tools and programs that can benefit sustainability in the NRCC. Foremost among these is the STAR Community Index, "a pioneering strategic planning and performance management system that will offer local governments a road map for creating healthy, inclusive and prosperous communities." STAR is based upon 10 Guiding Principles and 81 Sustainability Goals.

In December 2010, St. Louis was selected as one of 10 "STAR Beta Communities" (along with Atlanta; Austin; Chattanooga; Des Moines; King County, WA; Boulder, Cranberry Township, PA; New York; and Washington, DC). These communities are collaborating with ICLEI to "design and test STAR's online performance management system."

The STAR Community Index 10 Guiding Principles:

- Think—and act—systemically
- Instill resiliency
- Foster innovation
- Redefine progress
- Live within means
- Cultivate collaboration
- Ensure equity
- Embrace diversity
- Inspire leadership
- Continuously improve

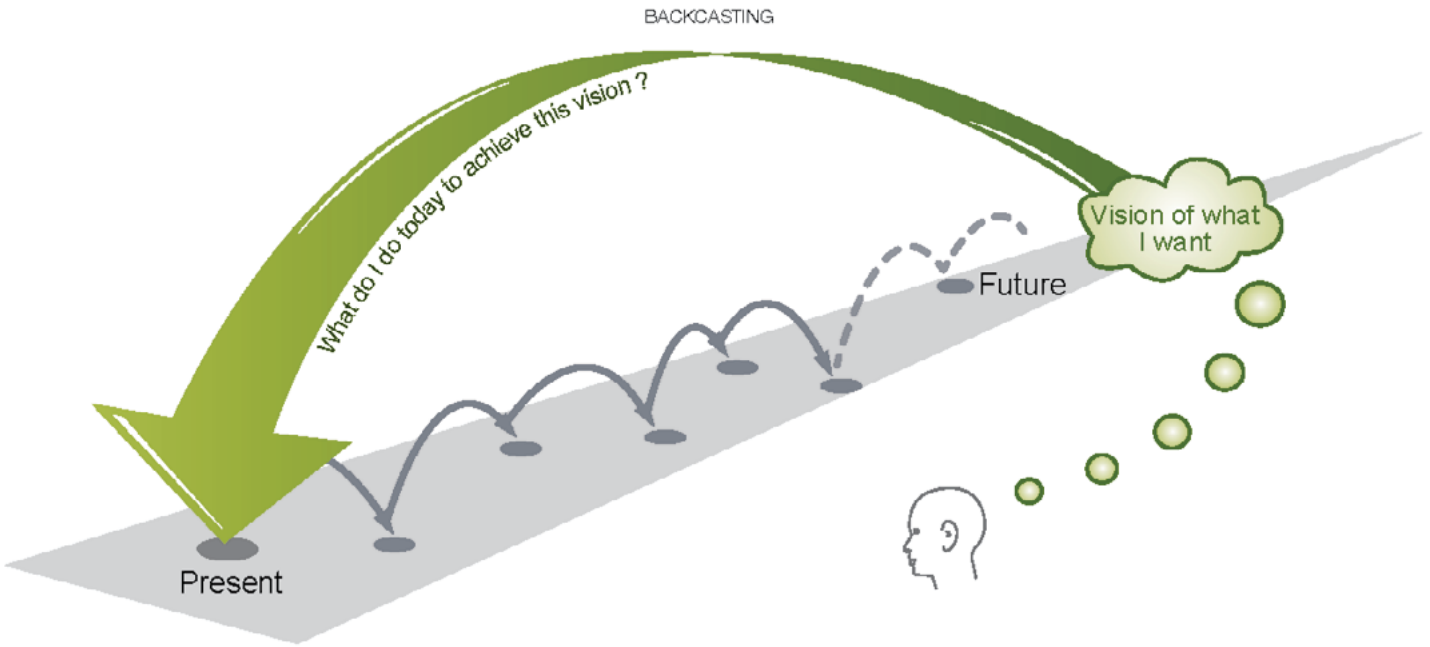


Figure 5.45 - Natural Step "Backcasting"

NATURAL STEP – SUSTAINABILITY PRIMER

Founded in Sweden in 1989, the Natural Step is an international non-profit organization that provides "training, coaching and advice on how to advance the practice of sustainable development." Their Sustainability Primer is not a rating system for sustainable development, but rather, an overview for organizations to understand root causes of "unsustainability", provide science-based definition of sustainability, and outline strategic framework for applying sustainability principles.

Organizations in the NRCC that have not enacted sustainable policies may find the Sustainability Primer useful in understanding and communicating the benefits of going green. For some organization decision-makers, this can be an important first step toward developing more comprehensive green strategies and policies.

One of the hallmarks of the international Natural Step movement is *backcasting*. Incorporated into an organization's strategic planning, the process of backcasting consists of determining a future goal, defining measure of success, then working backwards to chart the necessary steps to achieve that goal.

LOCAL PRECEDENTS

Various plans for the NRCC in recent years have incorporated sustainable design strategies for the Mississippi River riparian corridor, commercial and industrial facilities, and the adjacent neighborhoods. Public engagement for these projects has documented strong public support for improving the area's environmental conditions and serves as a basis for developing future sustainable design plans.

Partner organization on these plans and initiatives include non-profit groups (such as Grace Hill, Confluence Greenway, Trailnet, Old North St. Louis, Greenway Network, St. Louis 2004, Audubon Society, Whitaker Foundation and Trust for Public Land) as well as public agencies (such as the City of St. Louis, Missouri Department of Conservation, Missouri Department of Natural Resources, US Army Corps of Engineers, Great Rivers Greenway, US Fish and Wildlife Service and the National Park Service Rivers, Trails and Conservation Assistance Program.)

Gateway Parks & Trails 2004: The Clean Water, Safe Parks and Community Trails Initiative

In the late 1990s the St Louis 2004 community visioning effort was launched. One of the primary outcomes of this process was the Clean Water, Safe Parks and Community Trails Initiative. Through extensive community outreach, the process identified the community's desire to improve water quality, improve parks and build trail networks throughout the region. This initiative led to the November 2000 passage of Proposition C, which created the Great Rivers Greenway District in Missouri and the Metro-East Park and Recreation District in Illinois and initiated a new era of environmental consciousness in the St. Louis region, with particular attention directed toward stewardship for the Mississippi and Missouri Rivers.

Confluence Greenway

The conceptual plan for the Confluence Greenway covers 200 square miles from Downtown St. Louis to Alton, Illinois

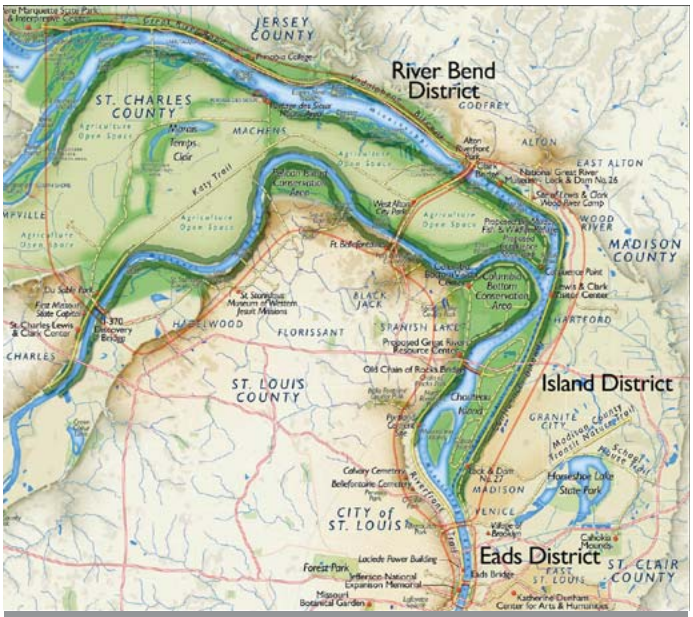


Figure 5.47 - The Confluence Greenway Plan celebrates the Missouri and Mississippi Rivers as the cultural, historic and physical center of the region.

Figure 5.46 - Greenways in the Gateway Parks & Trails 2004 plan reflects the community's priorities for improving water quality, parks and trails around the region.

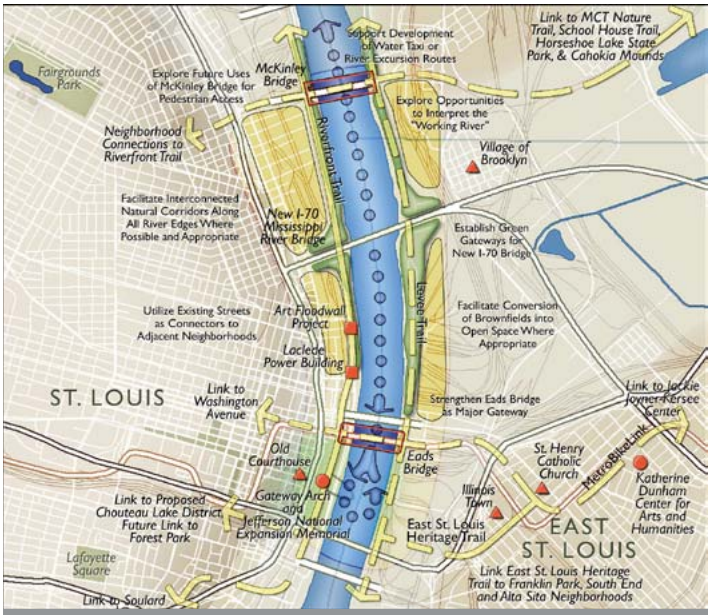


Figure 5.48 - The "Eads District" of the Confluence Greenway Plan highlights the industrial heritage of the St. Louis riverfront.

on the Mississippi River and to St. Charles on the Missouri River. While recognizing the importance of the working industrial riverfront, the Confluence plan includes recommendations to improve the ecological conditions along the rivers, provide recreational facilities and improve the public's ability to access the waterfront. The portion of the Confluence Greenway that includes the NRCC celebrates the region's river-based economic heritage with links to adjacent neighborhoods.

Mississippi Riverfront Trail

Original plans for a recreational trail along the Mississippi River were prepared in the late 1980s. The most complete and contiguous segment is the North Riverfront Trail, a 12-mile recreational trail connecting the Gateway Arch with the Old Chain of Rocks Bridge. It offers a unique experience to users, featuring the natural grandeur of the Mississippi River as well as the diverse activities of the working industrial riverfront. The plan's recommendations include enhancement of the Mississippi River riparian habitat and strategies to improve quality of stormwater runoff entering the River.

Riverfront Habitat Restoration Project

In 2009 the Confluence Greenway was supplemented with the Riverfront Habitat Restoration Project. This plan recognizes the influx of residents and visitors to the riverfront and makes recommendations for improving air and water quality. Existing natural areas along the Mississippi would be expanded with restored habitat, particularly in the corridor from Merchants Bridge to Humbolt Avenue.

Figure 5.49 - The River Ring network of greenways typically follow rivers, streams and other natural features.

Figure 5.50 - Riverfront natural areas are a central component of the Habitat Restoration Project.

The River Ring

The Great Rivers Greenway District's regional network of greenways is the River Ring. Most of these greenway corridors follow area rivers, streams and other natural features. In urban locations access to River Ring greenways is made through a variety of easements, utility corridors, levees, former rail road rights-of-way and on-street routes. As the center of the region and with bi-state linkages across the Mississippi River, the NRCC is a crucial segment of the River Ring and is mirrored on the Illinois side of the river by the Meto-East Park and Recreation District's network of trails and greenways.

Figure 5.51 - Alternative transportation, urban ecology and rainwater harvesting are sustainable design feature of The Trestle conceptual plan.

Figure 5.52 - The sustainable design for The Trestle includes specific corridors strategies for streets in the areas

The Trestle
Great Rivers Greenway is preparing plans to convert the former Iron Horse Trestle into an elevated linear park with a recreation trail, native landscape and other amenities. Extending 3/4-mile from the Mississippi River to the Old North St. Louis neighborhoods, the Trestle will provide safe access to the riverfront with a unique visitor experience and virtually no conflicts with existing commercial and industrial operations. Sustainable design is a central component of the plan for The Trestle. The plan proposes reuse of obsolete infrastructure and reclaimed materials, rainwater harvesting and features a landscape of indigenous species designed to restore the native habitat.

Sustainable Design Opportunities and Constraints

Incorporating sustainable design practices in existing and future developments in the NRCC will benefit the area in multiple ways.

ENVIRONMENTAL QUALITY
Both long and short term sustainable design measures will improve air, water, soil and habitat quality in this ecologically significant Mississippi River riparian corridor. Such improvements are consistent with various plans for improving environmental quality of the North Riverfront and Confluence Greenway. As a transitional zone within the larger Mississippi River hydrological system, improvements to the environmental quality of the NRCC will have positive impacts on downstream environments south of the area, in Missouri and Illinois.

PUBLIC PERCEPTION
Sustainable design practices will signal a new direction for the NRCC as a progressive, 21st Century enterprise. The new I-70 Mississippi River Bridge will provide the public much greater visibility of the NRCC's physical environment and an opportunity to project a new image for the NRCC's transformation. For the City of St. Louis, this would be a significant first step to re-brand the city's industrial heritage toward a progressive model, challenging conventional "Rust Belt" impressions of region.

COST SAVINGS
Sustainable design practices are inherently long-term investments toward reducing resource consumption as well as operations and maintenance costs. These potential savings should provide economic benefits to NRCC property owners, tenants and customers through lower overhead costs and higher profit margins.

PERSONAL HEALTH
Many personal health problems result from—or are exacerbated by—poor environmental conditions. Incorporating sustainable design best practices will improve environmental conditions in the NRCC, producing healthier work conditions for employees, visitors and residents.

6. PUBLIC ENGAGEMENT

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6. Public Engagement

Successful land use planning should include public outreach and stakeholder strategies designed to engage those who have a vested interest within a project's boundaries. The tools and techniques used to engage various stakeholders must be educational, informative, and transparent.

The project team identified several creative tools and techniques designed to engage and inform vested property owners, elected officials, special interest groups, and business owners about the Study's purpose and process. Such efforts included Stakeholder Meetings, Technical Workshops with City staff, and a series of Public Workshops. All of the information gathered from each was essential to the process and allowed the project to developing options and/or alternatives.

Stakeholder Meetings

To kick-off the Plan process the project team implemented a very aggressive schedule designed to engage a specific audience that could be potentially impacted by the various findings and recommendations for this Study. Because of the diverse group of the stakeholders that represent the area (primarily industrial businesses), strategies to engage the right audience were carefully identified with the assistance of SLDC. Beginning February 2011, the project team met with several property owners, businesses, developers, elected officials, and special interest groups who either represent the area to discuss the purpose for the Study and to solicit input regarding their interest in the project. In summary, everyone was very supportive of the Study and encouraged the project team to consider options that would improve access to the river and the MRT; improve the local infrastructure and stormwater system along Hall Street; identify amenities that would support the local businesses; create zoning plans or incentives for new development and connectivity to communities or attractions along the riverfront; and enforce safety within the area.

The following is the list of stakeholders that the project team met with throughout the process:

RAILROADS

- Union Pacific
- BNSF
- CSX
- TRRA

SPECIAL INTEREST GROUPS/ REGIONAL PARTNERS

- East West Gateway Council of Governments (EWG)
- Great Rivers Greenway (GRG)
- Metro
- Missouri Department of Transportation (MoDOT)
- Illinois Department of Transportation (IDOT)
- St. Louis Regional Chamber and Growth Association (RCGA)
- Trailnet, Grace Hill
- City of St. Louis: Board of Public Service (BPS), Planning & Urban Development Agency, Street Department

NORTH RIVERFRONT BUSINESSES

- Affton Trucking
- Covidien
- Performance Food
- P&G
- St. Louis Produce Market
- Grossman Iron & Steel Company

DEVELOPERS

- Green Street Development Group, LLC
- Balke Brown
- Chapman Ventures LLC
- Jones Lang LaSalle
- Duke Reality

SHIPPING / RIVER TERMINAL OPERATORS

- AEP River Operations
- American Commercial Terminal (ACL)*
- Beelman River Terminals *
- ARTCO *

** Businesses that are located in the NRCC*

ELECTED OFFICIALS

- Alderman April Ford – Griffin
- Alderman Dionne Flower
- Alderman Phyllis Young

UTILITY COMPANIES

- Ameren
- City of St. Louis Water Division
- MSD
- Trigen

PUBLIC WORKSHOP #1

On Thursday, March 24, 2011, SLDC and the project team hosted a Public Workshop to inform the public of the Plan's purpose and to garner input on their interest and investment in the area. The workshop was hosted at the MSD Bissell Point Wastewater Treatment Plant, St. Louis, Missouri, from 4:00 p.m. until 6:00 p.m.

The workshop format was an open house. This allowed attendees an opportunity to view exhibits presented at stations and meet with the project team members one-on-one to discuss their interest related to the project. Information and resources gathered will be used to garner a better understanding of the conditions within the project area, as well as the attendees' interest and investments in the area.

There were a total of six stations staffed with a representative from the project team. Each station provided information that was developed to inform the public of the process, next steps, and current conditions.

Highlighted below are the stations and the information presented to the public. They are as follows:

- *Welcome* – At this station, attendees were instructed to sign-in and take handout materials created to explain the purpose of the workshop and describe the room layout. In addition, a questionnaire was presented to solicit public comments.
- *Station #2: Study Overview* – At this station, attendees had an opportunity to view exhibits that highlighted the Study's goals and area FACTS, the schedule, and a map that defined the project boundary.
- *Station #3: Circulation* – At this station, attendees spoke to staff about issues and interest regarding access to businesses, the Municipal terminal, and local attractions.
- *Station #4: Aesthetics and Security* – At this station, attendees spoke to staff about safety and the perception of safety in the area and aesthetic improvements within the project area.
- *Station #5: Attraction and Recreation* – At this station, attendees spoke to staff about their interest amenities that would support or complement their investments in the area.
- *Station #6: Public Comments* - At this station, attendees had an opportunity to address the questionnaire and comment on all of the information presented during the workshop.

Figure 6.1 - Attendees Review Project Exhibits

Figure 6.2 - Attendees Discuss Aesthetics Issues with Consultant

Based on the sign-in sheet, 42 people attended the Public Informational Open House. *Tables 6.1* and *6.2* highlight the character profiles of the attendees.

REPRESENTATION		REPRESENTATION	
Business	15	Homeowner	0
Developer	3	Agency Partner	3
Recreation	4	Utility Company	5
Media	0	Elected Official	0
Special Interest Groups	9	Other	3

Table 6.1 - Attendees Profiles (42)

ORGANIZATION	REPRESENTATION
Businesses	
ACL Transportation	2
Beelman River Terminal	1
Gregg's Bar and Grill	1
Grossman Iron	1
Lackey Sheet Metal	2
Lange-Steeman	2
Mid-West System	1
Sandberg Phoenix	1
Smokie Os	2
Superior Express	2
Developers	
Commercial Properties	1
Green Streets Properties	1
LSEM	1
Agency Partners	
East West Gateway	1
Metro	1
Regional Chamber and Growth Association (RCGA)	1
Recreation	
Great Rivers Greenway (GRG)	1
Trailnet	3
Utility Company	
Ameren UE	2
Metropolitan Sewer District (MSD)	3
Special Interest Groups	
Campaign for Liberty	1
Chain of Rocks Community Association	2
Confluence Partnership	1
Congress for Racial Equality	1
HPCC	2
Legal Service Eastern Missouri	1
The People New Collaborative	
No Response	
Other	3

Table 6.2 - Attendees by Representation

There were several methods used to inform the community about the public workshop. Such efforts included circulating e-blast announcements to community stakeholders, and the NBBA. Elected officials representing the area were notified via e-mail and personal calls to their local offices. Project briefing kits were prepared for media and elected officials to review. And flyers were circulated to business and property owners within the Study area; and yard signs were strategically posted.

The attendees had the opportunity to submit their comments at the public workshop or up to seven days after the meeting to respond via e-mail or the postal mail. A total of 19 comments were received. Highlighted in this section are the questions from the questionnaire and a summary of the attendees' comments.

Question 1: Why did you choose to locate your business in the area?

Proximity to Downtown	2
Proximity to Municipal River Terminal xx	3
Highway Access	5
Rail Access	2
Other	4
No Response	10

Question 2: What do you see are the top three advantages to having your business in the north riverfront business corridor over the other possible locations in the City?

Access to highway, downtown, and new bridge	4
Proximity to Municipal River Terminal	2
Proximity to a multimodal options (highway, rail and barge)	2
Availability of Land	1
Industrial businesses / Redevelopment opportunities	1
Access to the river	2
Access to rail	2
The locks and dam	1
Ice/freezing water	1
Centrally located/less congestion	1
Access to barge, rail and freight	1
Level of capital investments precludes relocation	1
No Response	9

Question 3: Do you have customers and/or suppliers that could benefit from locating near your business?

Yes	2
No	1
No Response	15

Additional Comments:

- Always looking to promote development opportunities, i.e. distribution and value added manufacturers and further processing of new venture.

Question 4: Are there plans for your business to expand within the next 5 years?

Yes	5
No	2
No Response	10

Additional Comments:
Yes

- Always looking at possibilities of manufacturing additional products
- Plan to expand coal operation and add ethanol
- Always seeking the opportunity to expand
- Additional Comments (continued):

No

- Environmental Issues – Banks not loaning to small businesses
- Street Improvements
- Poor Access to 170/circulation and rail
- Security

Question 5: Do you use any of the following to ship supplies, goods, or products <u>in</u> to your business?

Highway	8
Rail	5
Barge	5
No Response	9

Question 6: Do you use any of the following to ship supplies, goods, or products <u>out</u> from your business?

Highway	6
Rail	4
Barge	4
No Response	11

Question 7: What are the top three traffic problems in the north riverfront business corridor?

Flooding on Hall Street and poor roadway conditions
Limited Traffic Signals in area
Train delays at railroad crossing and blockage at railroad crossing
Ease of access to interstate
Not enough street connection to the river and the neighborhoods
Access to I64
Proper street cleaning – especially on snow days
Access to the riverfront trail and recreation opportunities
Better access to Interstate 270
Low clearance bridges
Crime
Rush hour traffic congestion
No Response

Question 8: Do you use any of the following multi-use trails?

Riverfront	8
Branch Street Trestle/McKinley Bridge Bikeway	5
No Response	10

Question 9: How do you and your employees currently commute to work?

Automobile	10
Transit	1
Bicycle	1
Walk	0
No Response	9

Question 10: What improvements would you like to see in the area?

Better sewer infrastructure to support the heavy rain falls in the area
General clean-up and better security
Enforce safety and traffic laws against drag-racing on Hall Street during the evening and weekends
Demo abandon buildings
A plan that enforces a full development district vs. partial redevelopment
More sidewalks and street lights
Vacant buildings being restored, occupied, or demolished
More amenities in the area (restaurants, grocery stores, gas stations, etc.)
Rail expansion and better coordination with businesses in the area
Make opportunities for urban agriculture and jobs
A new Multimodal facility
Roadway improvements
Better access to waterways
Safe accessibility connections between the Riverfront trail and neighborhoods to the west
Improve the flood walls and levee gates and pump stations
Relocate the prison

Question 11: What is your vision for the North Riverfront Business Corridor? How would you describe the area 20 years from now?

Would like to see more industrial warehouses
Would like to see a vibrant sustainable, multi-use and corridor that celebrates the river, industries and recreation
Would like to see growth and better access for rail and truck access to barge transportation
Would like to see more jobs created in the area
Would like to see a more recreational opportunities along the riverfront such as excursion boats cruising up to the Chain of Rocks
Would like to see the area revitalized and new products introduced to the area
Would like to see infrastructure improvements and intermodal improvements
Would like to see existing docks expanded along the north river banks rather than expansion going to St. Louis County or Illinois
Would like to see mixed use development fully utilizing intermodal resources in appropriate parcels
Would like to see ease of traffic flow and interconnection with interstate
Would like to see larger availability of acreage to meet the needs of modern manufacturing companies
Would like to see the area become a worldwide manufacturing hub
Would like to see more land available for large manufacturing companies like Earth City and Chesterfield Valley – including a shopping area
Would like to see area become a central shipping location
Would like to see vital businesses populating N. riverfront corridor
Would like to see public private investments

Question 12: Are you aware of other stakeholders the consultant team should be engaging in this process?

Yes	1
No	1
No Response	16

Other stakeholders the team should meet with:
Dial

SUMMARY

A summary of general comments and concerns expressed by respondents are highlighted below. They are as follows:

1. It is important that the project team vet the potential of clean/green businesses in the area. This opportunity could be good for the river, air quality, and attracting talented professionals to the City.
2. The project team should explore different revenue generating power of a predominately heavy industry verses doing a mix of industry.
3. St. Louis is poised to be one of the greatest riverfronts in the world. It will be a costly opportunity missed if this section does not contribute to making the river a destination place for the City as a whole.
4. City should go after more tax incentives to support development, redevelopment, and potential business opportunities.

PUBLIC WORKSHOP #2

On Tuesday, August 23, 2011, the St. Louis Development Corporation (SLDC) hosted a Public Workshop at the MSD Bissell Plant, 10 East Grand, in St. Louis, Missouri from 4:00 p.m. – 6:00 p.m. The purpose of the workshop was to gather input from the public on the conditions and findings from the NRCC infrastructure, transportation, land use and market analysis.

The workshop was an open house format. This allowed the public an opportunity to view information at their leisure and speak with SLDC staff and members of the project team available regarding their interests and issues related to the project. Attendees were informed of the study's progress to date, transportation conditions, infrastructure analysis, land use conditions, and stakeholder comments from previous workshops.

Every participant had the opportunity to comment on the information presented. There were various ways to provide comment which included: writing their comments and submitting them at the meeting; or mailing/e-mailing their comments to Hudson and Associates, LLC, seven days following the workshop.

PUBLIC WORKSHOP ANNOUNCEMENTS AND OUTREACH EFFORTS

SLDC, in coordination with the project team, utilized all efforts to ensure that the public was informed about the workshop. Such efforts included, e-blast and mailing public workshop notices as well as posting yard signs throughout the Study area. In addition, SLDC staff and members on the project team participated in various media (radio and TV) interviews. Media coverage was as followed: Monday, August 22 – Channel 4 (Andre Hekpins), Tuesday, August 23 – Channel 2 (Chris Regnier), Monday, August 29 –St. Louis Beacon (Alex Scuito), Friday, September 2- Channel 4, Extra Edition (Steve Perron).

PUBLIC WORKSHOP FORMAT

An open house format was used to present information at the workshop. There were a total of eight stations. Each station provided information that was developed to inform the public about the process and project findings.

Highlighted below is the layout of each station in the order information was presented to the public:

- Station 1: Welcome and Sign-In – Representatives on the project team greeted all attendees and explained the hearing process. Attendees were instructed to sign-in, given a diagram of the room layout, a handout of the information being presented and a comment form.
- Station 2: Project Overview – At this station the public learned about the Study's purpose, process, and schedule.
- Station 3: Land Use – At this station the public viewed exhibits that illustrated existing and proposed land use strategies for the North Riverfront area.
- Station 4: Transportation – At this station the public viewed exhibits that highlighted street and pedestrian connectivity as well as rail improvements.
- Station 5: Infrastructure Analysis - At this station the public viewed utility locations within the Study area.
- Station 6: Sustainability Design –At this station the public learned about potential opportunities to build upon existing attractions and recreation amenities in the area, as well as creation of new sustainable opportunities that will support future growth and development along the Study area.
- Station 7: Marketing Analysis –At this station the public learned about the SWOT assessed by the project team.
- Station 8: Public Comments – At this station the public had the opportunity to view some of the most common themes expressed during previous public/stakeholder meetings and leave written comments regarding their interest with staff or in a comment box.

PUBLIC WORKSHOP ATTENDANCE PROFILES

There were 75 people who attended the Public Workshop. The attendance data was collected from the sign-in sheet. *Tables 6.3* through *6.5* highlight the attendees according to the special interest groups they represent.

PUBLIC COMMENTS AND RESPONSES

Stakeholders were asked to provide input and rankings on the issues being considered in the study area. A questionnaire was used to receive input and the charts below illustrate the results of the rankings based on the public's input. If a category was ranked the top three or four depending on the number of categories, it was tallied as most

important. Consequently, rankings below the top tier were totaled as least important.

Please note that some individuals who provided input did not complete the ranking section or that the questions were not applicable to them. Additionally, some stakeholders put check marks instead of a numerical ranking and others used the same number to rank multiple categories instead of ranking them against each other.

RANKINGS SUMMARY BASED ON INPUT RECEIVED

Business Attraction

A small number of individuals with current businesses provided a ranking on business attraction and retention in the study area. Centralized location and highway access were identified as most important priorities for this group.

Business Challenges

The challenges for business recruitment and retention in the study area were also ranked by stakeholders. The perception of crime/safety was an unanimous choice (100%) as the most important challenge. It was followed by environmental issues and lack of service/amenities.

East West Gateway	1
Missouri Department of Natural Resources	1

Table 6.3 - Agency Partners Total in Attendance

City of St. Louis Alderman	1
Missouri State Senator	1

Table 6.4 - Elected Officials Total in Attendance

Area Businesses	13
Developers	10
Others	34
Great Rivers Greenway/Confluence Partnership	3
Trailnet /Sierra Club	3
Utility Companies	7
City Official	1

Table 6.5 - Special Interest Groups Total in Attendance

RANKINGS SUMMARY BASED ON INPUT RECEIVED

Business Attraction

A small number of individuals with current businesses provided a ranking on business attraction and retention in the study area. Centralized location and highway access were identified as most important priorities for this group.

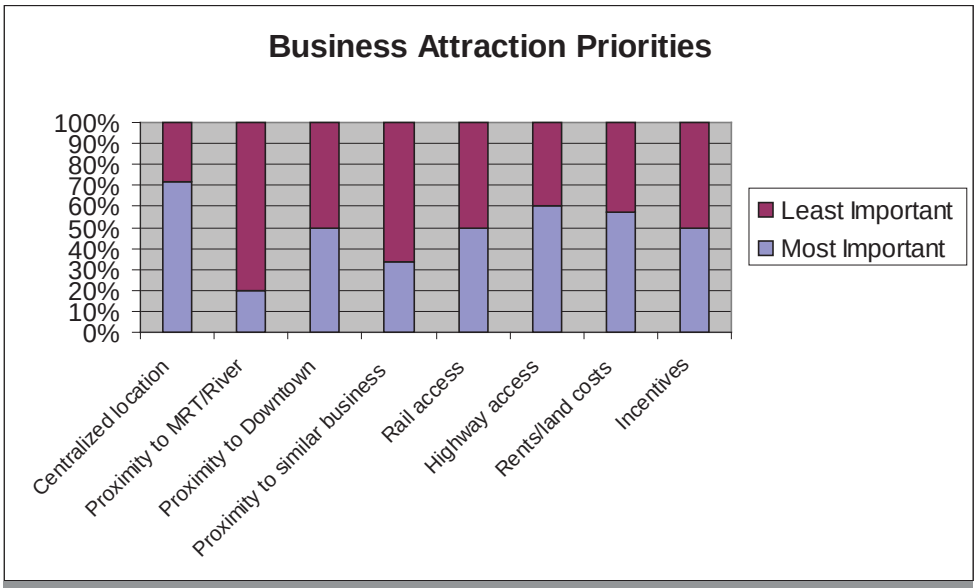

Figure 6.3 - Business Attraction

Business Challenges

The challenges for business recruitment and retention in the study area were also ranked by stakeholders. The perception of crime/safety was an unanimous choice (100 percent) as the most important challenge. It was followed by environmental issues and lack of service/amenities.

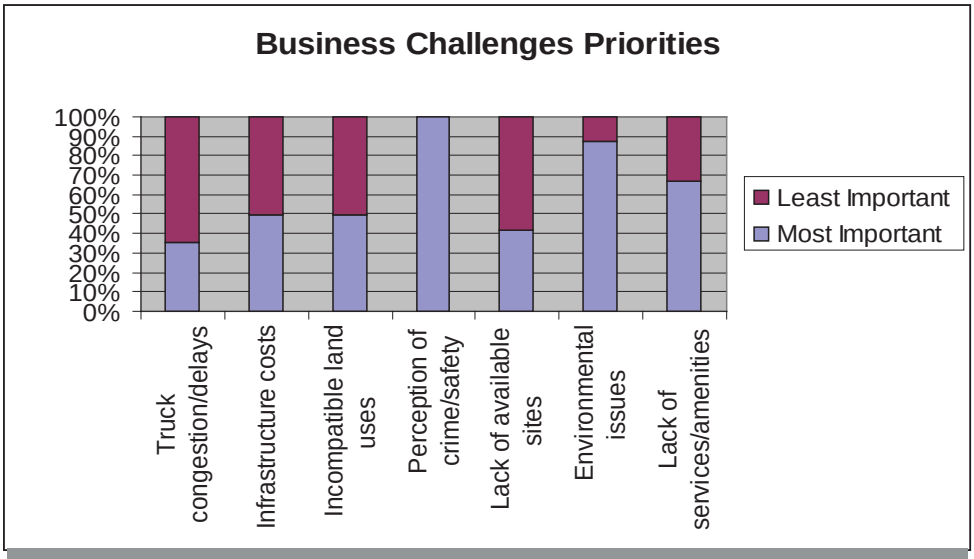

Figure 6.4 - Business Challenges

Infrastructure

Infrastructure priorities were closely ranked by participants. Reduce flooding on Hall Street, improve access to the MRT and/or Riverfront, management of site specific stormwater requirements and assistance with implementing the requirements to separate sanitary and storm sewer lines received a most important ranking of 80 percent or greater.

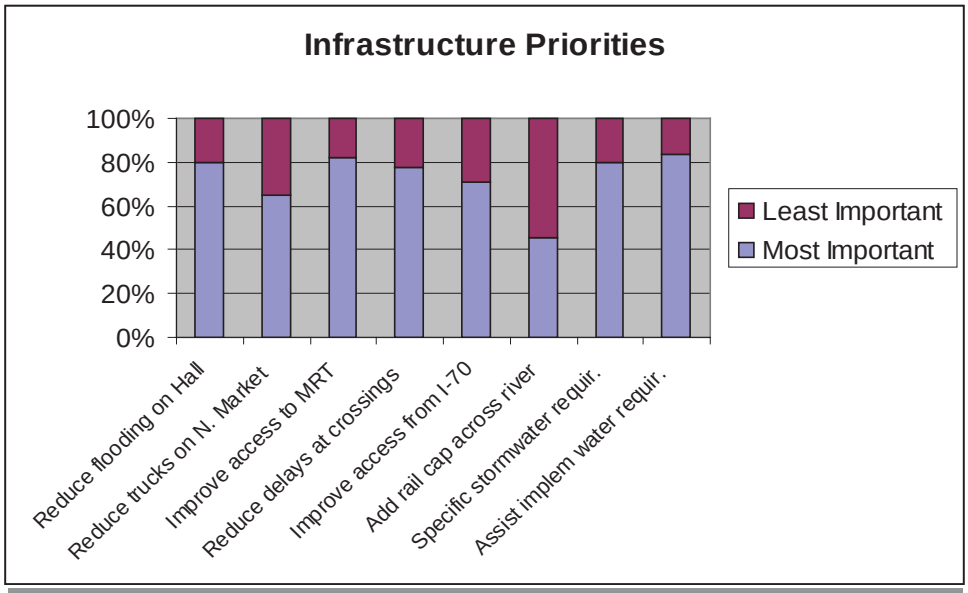

Figure 6.5 - Infrastructure

Amenities and Services

The results for potential amenities and services in the study area are charted below. Streetscape and landscape enhancements along roads and public areas were ranked as the most important priority. It was followed by security patrols in addition to current police patrols and bicycle/pedestrian facilities.

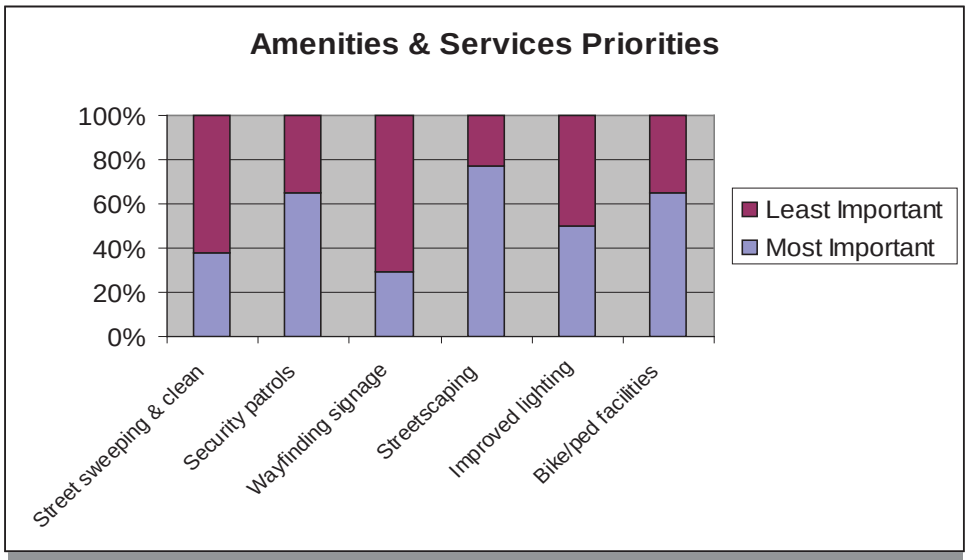

Figure 6.6 - Amenities and Services

Sustainable Design

The priorities for sustainable design were fairly even. The use of renewal energy, ecological/habitat restoration, alternative modes of transportation and stormwater best management practices were all highly ranked.

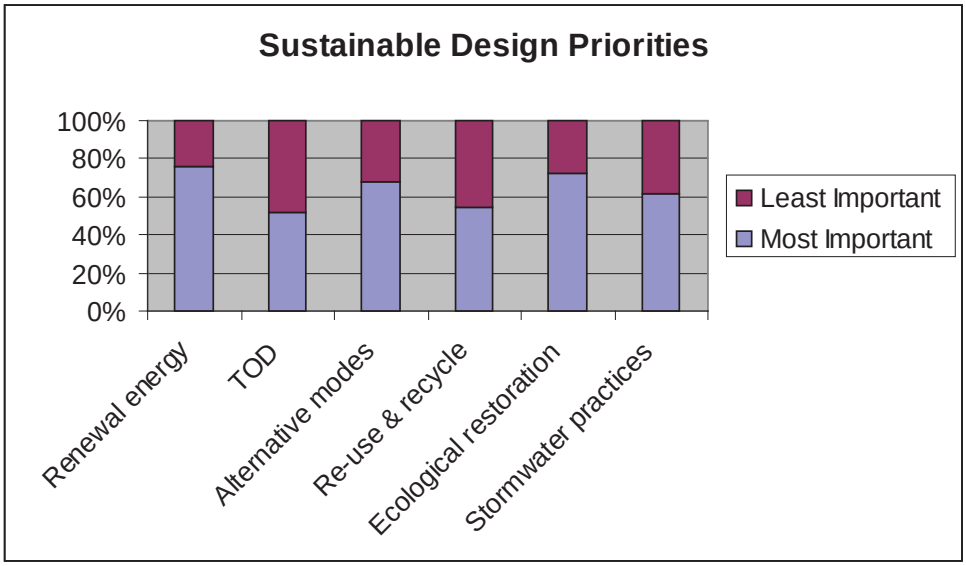

Figure 6.7 - Sustainable Design

Bicycling/Pedestrian

The bicycling/pedestrian priorities were also ranked by participates. Complete streets were the overwhelming choice (90 percent) as most important. It was followed by historical/ecological interpretive signage and separated bike paths.

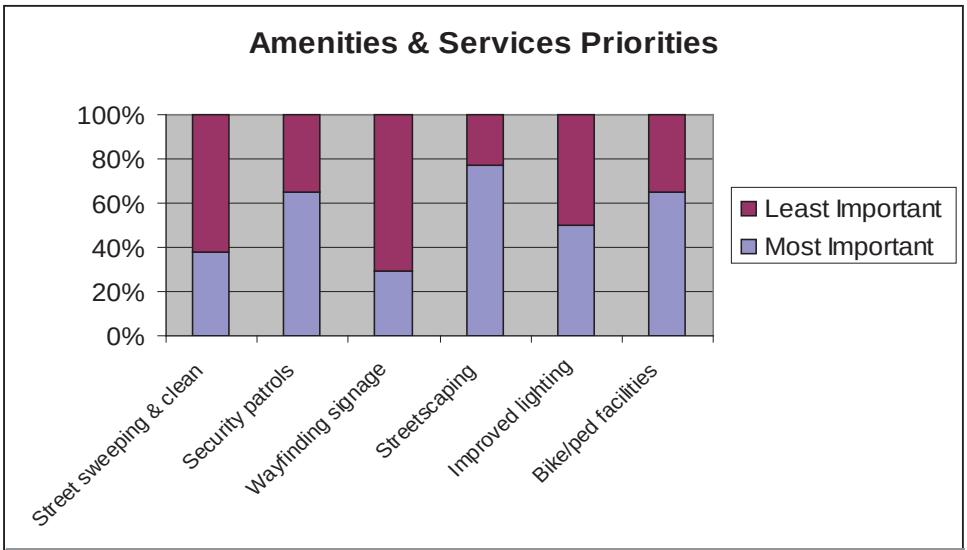

Figure 6.6 - Bicycling/Pedestrian

SUMMARY

The conclusions that can be drawn from the input received are as follows:

- The perception of crime/safety was a unanimous concern from stakeholders.
- Environmental issues are a significant challenge to business attraction and retention.
- Infrastructure priorities are numerous. Flooding, access and stormwater requirements were listed as the most important issues.
- Streetscape was ranked as a high priority in relation to potential amenities and services.
- There is a strong interest in developing a sustainable design concept for the area.
- Complete streets received a majority importance ranking in regard to bike/pedestrian facilities.
- Safety, appearance, business development, and environmental impacts were common themes from stakeholder input.

PUBLIC WORKSHOP #3

On Tuesday, October 18, 2011, the SLDC hosted the final Public Workshop at the MSD Bissell Plant, 10 East Grand, in St. Louis, Missouri. Held from 4:00 p.m. – 6:00 p.m, the workshop's primary objective was to gather input from the public on draft strategies and recommendations being considered by SLDC. The information gathered from the workshop aided SLDC and the project team with finalizing the Plan recommendations.

Structured as an open house, the public had an opportunity to view information at their leisure and speak with SLDC staff and members of the project team. Attendees were informed of the study's process and goals, progress to-date, draft strategies and recommendations under consideration by SLDC, and stakeholder comments from previous workshops.

Forty stakeholders participated in the informational process via public meeting or e-mail/mail. Input about the study strategies and recommendations were captured by a questionnaire.

PUBLIC WORKSHOP ANNOUNCEMENTS AND OUTREACH EFFORTS

This section documents the different approaches and tools used to encourage public open house meeting attendance and participation including:

- Development of a mailing list comprised of nearly 250 study corridor property owners, stakeholders, elected officials, special interest groups, and business owners. These individuals received meeting notification via the mail and e-mail.
- Placement of yard signs in the NRCC area, specifically along North Broadway and Hall Street.

In addition, SLDC staff and members on the project team participated in KMOV TV interviews with Andre Hepkins the day of the workshop.

PUBLIC WORKSHOP FORMAT

Attendees had the opportunity to view display boards at five informational stations. Each station was staffed by SLDC representatives and study the team who provided information about the study process and project findings.

Highlighted below is the layout of each station in sequence:

- Station 1: Welcome and Sign-In – Study team representatives greeted all attendees and explained the meeting process. Attendees were instructed to sign-in, given a diagram of the room layout, a handout of the information being presented and a comment form.
- Station 2: Study Overview –The public learned about the study's purpose, process, and schedule at this station.
- Station 3: Land Use – The public viewed exhibits that illustrated organizational elements for land use – Corridors, Development Districts, Sustainability, and Transportation.
- Station 4: District Plans – At this station the public viewed exhibits that highlighted recommendations for the six Development Districts.
- Station 5: Public Comments – At this station the public had the opportunity to view some of the most common themes expressed during previous public/stakeholder meetings and provide written comments regarding their interest with staff or in a comment box.

PUBLIC WORKSHOP ATTENDANCE PROFILES

The attendance data was collected from the sign-in sheet. Table 6.6 highlights the attendees according to the special interest groups they represent. Although not in attendance, written comments were received from the MoDOT Area Engineer and TrailNet.

Agency Partner	City Official	Special Interest Group
East West Gateway Council of Governments	City of St. Louis Streets Department St. Louis Development Corporation	Great Rivers Greenway Laclede Gas MSD NAACP St. Louis Port Authority

Table 6.6 - Attendance Profile

PUBLIC COMMENTS AND RESPONSES

Attendees received a questionnaire as they entered the open house. They were asked to complete the document on-site after they visited all the stations. Of those attending, 72 percent completed questionnaires. An additional 15 comments were submitted by e-mail/mail. The following provides a summary of feedback compiled from the questionnaires. In keeping with the questionnaire organization the results are discussed in the following order: site connection, principles, recommendations, elements and other comments.

There are not an equal number of responses for each question because some attendees did not provide comments.

SUMMARY BASED ON INPUT RECEIVED

Site Connection

Attendees identified their connection and the applicable zip code by noting if they were a business owner, study area employee, developer, representing constituents, commuter or a resident. More respondents indicated that they work for a business or institution in the study area (28 percent) followed by commuters (22 percent) and developers (22 percent). The table below shows a distribution of responses.

Percent	Response	Zip Code
28%	Study Area Worker	Study Area Worker
22%	Developer	Developer
22%	Broadway/Hall Street Commuter	Broadway/Hall Street Commuter
17%	Resident	Resident
11%	Business Owner	Business Owner
100%	Total	Total

Table 6.7 - Site Connection

Principles
Attendees were asked which three of the following principles align with their mission or individual interest in future development plans:

- Attract high-quality jobs;
- Fully leverage the central location in the region and access to river, rail and highway;
- Provide quality service and unique amenities to remain competitive;
- Replace older deteriorating infrastructure; and,
- Be a sustainable "green" business community.

The top three principles selected by the workshop participants for the NRCC were services and amenities (28 percent), central location (24 percent), and high-quality jobs (24 percent). *Table 6.8* provides the distribution of responses.

Recommendations
Attendees were asked to share their thoughts about the recommendations SLDC is considering for the area. The project team used this information to refine the strategies and address the defined plan goals. The three defining NRCC Corridors were divided into the following six development districts.

- Natural Riverfront
- Working Riverfront
- Commercial Mixed-Use (Market)
- Value-Added Manufacturing (Carrie)
- Neighborhood Mixed-Use (Baden)
- Regional Manufacturing/Distribution (Hall)

Percent	Response
28%	Quality Services and Amenities
24%	Leverage Location and Access
24%	High Quality Jobs
16%	Replace Deteriorating Infrastructure
8%	Green Business
100%	Total

Table 6.8 - Future Development

The recommendation for each district includes the vision, targeted businesses, key infrastructure investments, stormwater strategies, amenities, and key incentives. More than 50 comments were received providing numerous insights on the recommendations. The comments have been condensed and synthesized for ease of understanding. Actual verbatim responses are in the appendices.

Natural Riverfront District
Most of the responses for the Natural Riverfront District were positive. Respondents agreed with the sustainability strategies like using large-scale collective stormwater enhancements (permanent open spaces), enhancing the river's edge and the Greenway Rivers Greenway (GRG) riverfront trail. One respondent noted that the GRG trail is a great asset and can improve the area's image. Another suggested that it be expanded to include a river walk similar to the one in San Antonio, Texas. Another positive cited was improved highway and roadway access. Two issues were raised. Addressing crime was noted as well as ensuring that the levee protects the area from flooding.

Working Riverfront District
Opinions on the Working Riverfront District recommendations varied. The public agreed with targeting inter-modal business with a river focus; directional wayfinding signs for the MRT and Riverfront businesses; and, utilizing green open space for a Greenway/Riverfront trail. Others noted there are other opportunities such as a linkage with America's Central Port in Madison County or taking advantage of the cost-effective available land. Issues cited as a deterrent to the recommendation were the 1% earnings tax and area crime.

Commercial Mixed-Use (Market District)
Respondents' perspective diverged around the Commercial Mixed-Use District recommendations. Some concerns were expressed about the target businesses, specifically mixing retail with commercial and heavy industry. It was noted that retail should focus on services such as truck stops and restaurants. Another respondent suggested that priority be given to businesses that require intermodal transportation. One respondent noted that minority-owned businesses should be targeted.

Value-Added Manufacturing (Carrie District)
Several respondents commented on the Value-Added Manufacturing District's recommendations noting that additional incentives be made available for heavy industry or for manufacturers take advantage of Ameren heavy power incentives. Another respondent suggested similar tax advantages used for Soulard Market for the riverfront. One respondent asked about the availability of sites for ground-up development and another about Burlington Northern moving its inter-modal yard to the study area. Other comments were received regarding attracting small, medium-sized minority business and controlling the water issue in Baden.

Neighborhood Mixed-Use (Baden District)
Most of the comments received about the Neighborhood Mixed-Use District were positive. Respondents agreed with upper-floor residential; focus on the street edge; complete street sustainable strategies accommodating vehicles, pedestrians and bicycles; as well as key incentives for community improvements. One respondent noted that

residential development should preserve Baden- area history. Another respondent expressed that neighborhood mixed-use is a bad idea; while another said crime is a major problem.

Regional Manufacturing/Distribution (Hall District)
There were only a few comments about the Regional Manufacturing/Distribution District that related to the recommendation. One respondent stated that the best had been saved for last, while another indicated that St. Louis can bring manufacturing back to the United States. It was suggested that local companies offer the training to engage the community for the recommended "quality jobs program." Once again, attracting minority-owned manufacturing, wholesale and distribution business was cited and the three anchors (Dial, Covidien and P&G) were noted as being a great marketing tool for getting like-kind business to the area. The new Mississippi River Bridge was regarded as a major access improvement to route people directly to the area (as opposed to around it.) One respondent asked if the tax incentives being offered are competitive with those available for the Gateway Commerce Center and Lakeview in Edwardsville, Illinois. The Brownfield Tax Credits were suggested for this area to incentivize development of contaminant property.

Elements
The following is a list of elements that respondents noted that the Plan contain:

- Parcel level maps
- Proposed zoning changes
- Greenway resources
- Bicycle and pedestrian circulation plan
- Transportation plan that explores interactions between transportation and land use including conflicts between different modes
- TrailNet Gateway Bike Plan routes for Branch Street (August 2011)
- Comprehensive set of guidelines and drawings
- Parking behind buildings
- Incentives for community stabilization and redevelopment
- Plans to address crime
- Upgrades to Merchant Bridge for freight movement
- Mary Meechum Freedom Crossing on maps
- Tax advantages for exterior building improvements
- Less red tape at city hall

Other comments
Respondents were asked to provide other comments that were not captured on the questionnaire. The comments relating to changing the slip ramp or interchanges on Broadway as well Hall Street improvements were forwarded directly to the project team.

SUMMARY
The themes that can be drawn from the input received are as follows:

- The perception of crime/safety was a concern from respondents.
- There are additional tax incentives that can be used.
- Retail services and amenities such as restaurants and truck stops are needed.
- Mixing residential with heavy industry was a concern.
- Flooding is a major concern.
- Commercial development and industry that requires inter-modal facilities should be a priority.
- Complete streets such as bike/pedestrian facilities are popular.
- Safety, appearance, business development, and environmental impacts were of importance.

APPENDIX I:
BRAND GUIDELINES

NORTH RIVERFRONT COMMERCE CORRIDOR

Location. Connectivity. Opportunity.

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BRAND PROFILE

The North Riverfront Commerce Center's new brand reflects energy and multi-modal movement. The brand's basic elements of logo, font/typography, color palette and layout are the building blocks for consistently and effectively communicating who we are. This guide documents these important visual elements as well as the brand profile and key messages that shall be used to guide all corporate communications

Brand Essence

The distillation of a brand into a succinct core concept. Directly communicates the brand in the simplest terms and is fundamentally rooted in customer need.

Business and Industry's Central Opportunity Hub

Brand Promise

The unique benefit the brand brings. An internal statement; the tagline is based on the brand promise. A key challenge is making it lofty yet believable and achievable.

We offer business and industry the ideal location in which to make and move product nationally and internationally.

Brand Positioning Statement

A statement conveying the brand's unique and intended position within its market
(target perception).

We provide the central U.S. opportunity for multimodal access, manufacturing and distribution. With complete access to the resources of St. Louis, Missouri, this business corridor connects businesses to their suppliers and markets through international airport access, five main interstate highways and six Class I railroads in addition to the 14,500 mile inland waterway system of the Mississippi River basin.

Core Messages

Multimodal Hub: Direct access to river port, railroads, interstate highways and international airports

International Gateway: Central location near a major metropolitan area, ideal for doing business nationally and internationally

Central, Accessible: Easy to get to from anywhere in the country, as close as it gets to all major transportation options for people and materials near the population center of the U.S.

Established: Historic area of St. Louis with established multimodal transportation options and anchor industries already in place

Up And Coming: Visionary master plan and engaged community

Support And Opportunity: Multiple tax credits and incentives offered, committed support from local authorities

Sustainable: Committed to clean, inviting, environmentally sustainable development

Uncongested: Room to grow, convenient, easily accessible

Synergistic: The synergy of all these assets - central location, multiple modes of transportation, up and coming area, community support and incentives - provides a unique opportunity

Brand Personality Attributes

The brand's image or brand identity, expressed in terms of human characteristics which personify the brand message. The attribution of these human traits to a brand helps achieve differentiation through prepared communications and people who represent the brand (employees and management).

DYNAMIC	**VIBRANT**
ENGAGED	**SMART**
BUSINESS FOCUSED	**READY TO SERVE**
ACCOMMODATING	**FLEXIBLE**
EXPANSIVE	**HOSPITABLE**
COMMITTED	**ENERGETIC**

LOGO

Location. Connectivity. Opportunity.

COLORS & FONTS

COLORS

PANTONE 548
C: 100 M: 24 Y:0 K:64

PANTONE 1805
C: 0 M: 91 Y:100 K:23

PANTONE 7532
C: 0 M: 17 Y:50 K:65

PANTONE 7495
C: 25 M: 0 Y:80 K:30

FONTS

ITC Cheltenham Std Bold Condensed

ABCDEFGHIJKLMNOPQRSTUVWXYZ1234567890
abdefghijklmnopqrstuvwxyz

ITC Franklin Gothic Demi Condensed

ABCDEFGHIJKLMNOPQRSTUVWXYZ1234567890
abdefghijklmnopqrstuvwxyz

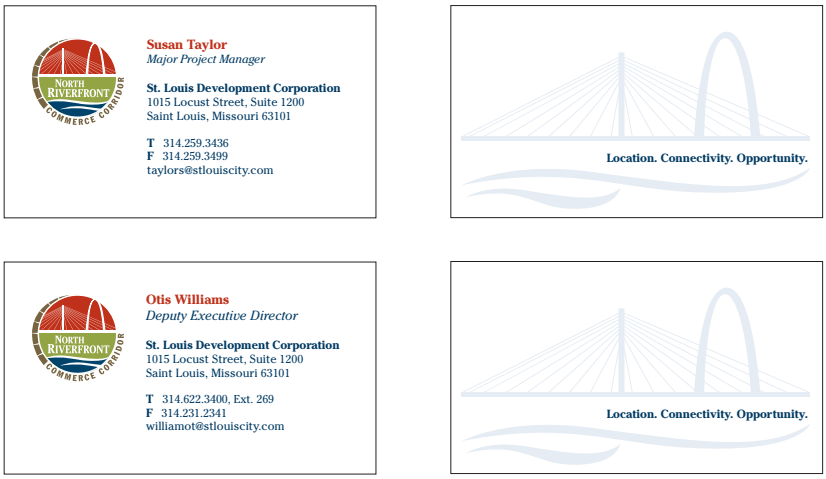
ITC Cheltenham Std Book

ABCDEFGHIJKLMNOPQRSTUVWXYZ1234567890
abdefghijklmnopqrstuvwxyz

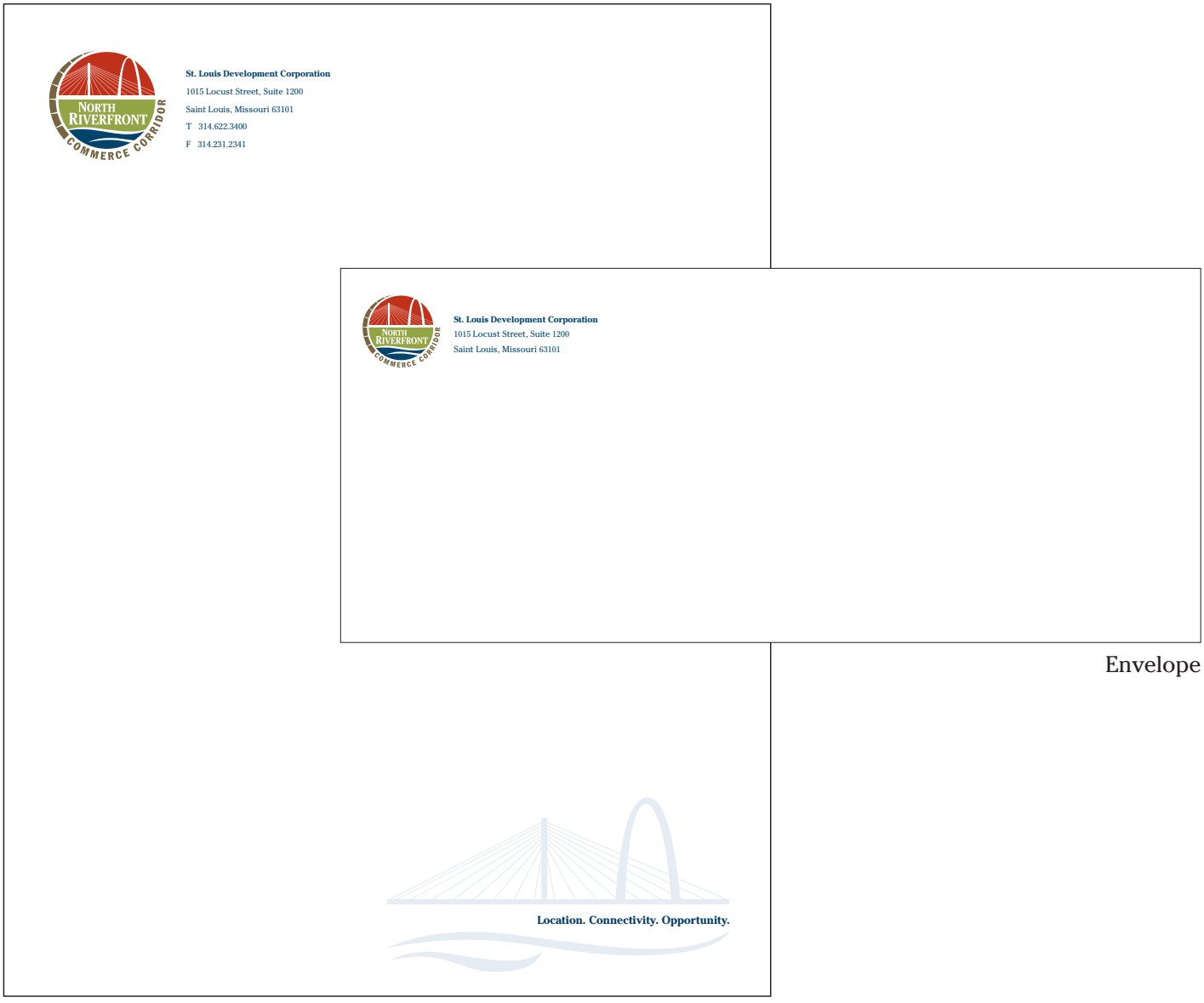
ITC Cheltenham Std Book Italic

ABCDEFGHIJKLMNOPQRSTUVWXYZ1234567890
abdefghijklmnopqrstuvwxyz

STATIONARY



Business Cards



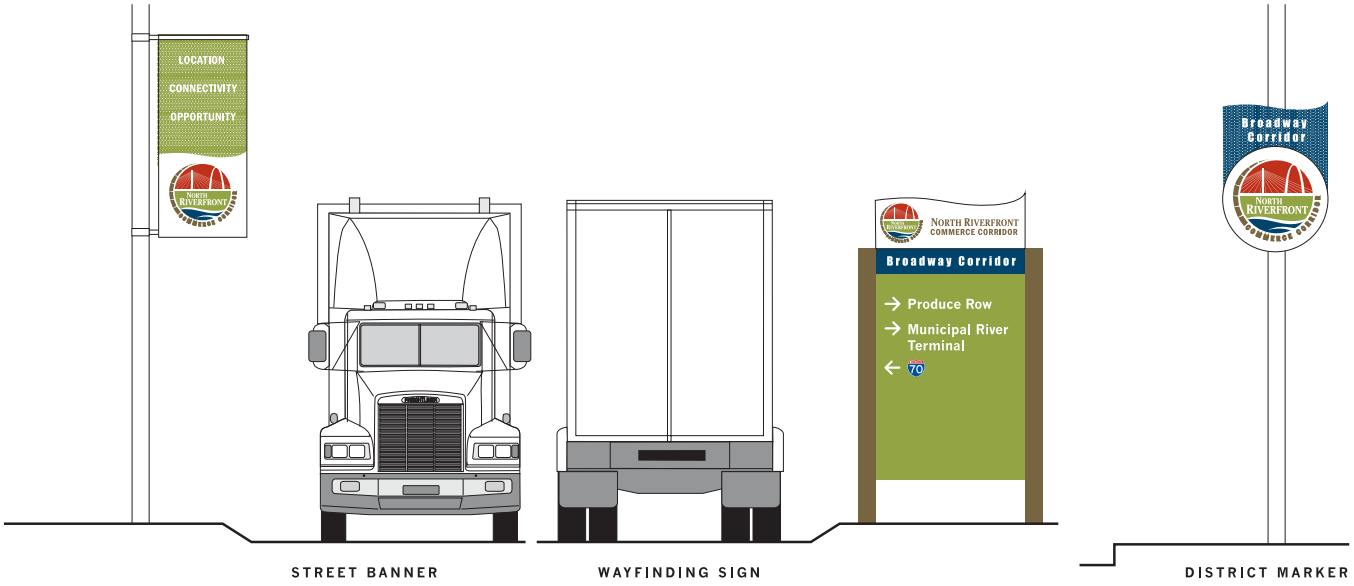
Envelope

Letterhead

SIGNAGE

Signage Examples

The choice of sign type and size will depend on each unique set of site conditions.



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APPENDIX II:
MARKETING STRATEGIES

NORTH RIVERFRONT COMMERCE CORRIDOR

Location. Connectivity. Opportunity.

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INTRODUCTION

In January, 2011, the St. Louis Development Corporation (SLDC) kicked-off a study to assess current conditions and potential development opportunities for the North Riverfront Business Corridor located on the north end of downtown from Cass Avenue to Maline Creek, and east of Interstate 70 and Broadway Street.

The goal of the North Riverfront Commerce Corridor (NRCC) Land Use Study is to develop a plan that serves as a guide for future development within the 3,000 acre North Riverfront Business Corridor. The Plan is intended to spur sustainable economic growth by emphasizing emerging businesses and industries that support quality job growth for the City of St. Louis and the surrounding region. Building on the existing strengths of the Port of Metropolitan St. Louis, the Municipal River Terminal (MRT), six class one railroads, interstate connections and accessibility to Lambert International Airport, the area is poised to become a premier multimodal hub for the central region in the United States.

Once the Land Use Plan has been finalized, SLDC's marketing strategies will be defined as a blueprint for identifying specific audiences and promoting the land use plan regionally, nationally, and internationally. The plan is designed to set the framework for SLDC to publicize the proposed land use concepts and incentives; roadway and infrastructure improvements; as well as the Municipal River Terminal (MRT) investments and benefits. The plan will contain the following elements: goals and target audiences; overall marketing strategy; key messages and logo; marketing tools and techniques; and responsible party.

MARKETING GOALS

The goals for the Marketing Plan are to:

- ✓ Maximize use of existing organization resources and communication channels to ensure the Land Use Plan is marketed to targeted stakeholders.
- ✓ Stimulate economic development in the region by attracting new growth in the area.
- ✓ Attract new businesses and sustain existing businesses in the area.
- ✓ Promote the Municipal River Terminal and attract new business.
- ✓ Develop and maintain a high level of stakeholder understanding and confidence in the City's commitment to improve the area.

MARKETING PLAN

There will be several tools and techniques implemented to market industries and investors about the proposed Land Use Plan. Traditional marketing tools such as website (or page), networking, media relations, and collateral materials will be combined with innovative and interactive outreach like social media tools will be utilized to target a larger national and international audience.

The Marketing Plan is comprised of seven elements. Each element identified provides an opportunity to incorporate tools and techniques created to attract investor interest in the area, improve the MRT business through networking and developing key strategic alliances, and attracting new businesses to the region. Listed below are highlights of each element.

Process Branding & Messaging – The Land Use Study team will create various media types designed to brand a special image or identity for the area. Such methods will include a logo, tagline and statement that identify the unique and intended position within the area. The concepts will be used as a template for presentations, newsletters, flyers, and reports. This will help establish a cohesive and integrated look for the project.

Marketing Campaign – Once the Land Use Plan is adopted, it is important that SLDC kick-off a marketing campaign designed to tell the story early and often in an attempt to generate interest and support for the plan. Efforts should include a press conference and tour of the area with key elected officials, stakeholders and regional media outlets. A regional summit should be hosted immediately following the press conference to strongly market the area by highlighting the City's goals and vision for the area. Developers, brokers, current and future business investors should be the targeted audience. Finally, a year-long e-blast blitz campaign should be launched announcing or informing regional business leaders and investors about the area plan and incentives to generate interest for at least a year.

Networking/Partnering Opportunities – Interacting with industry leaders nationally and internationally is one of the most effective marketing tools for exchanging information about the Land Use Plan and attracting new commerce to the area. Attending trade conferences and shows, seminars, meetings, workshops, and business symposiums creates additional opportunities to promote and inform potential investors about the plan. During these events it is imperative to make key connections and follow-ups by scheduling one-on-one meetings with -key- decision makers. One cost effective way of networking will be to join forces with existing organizations with the same regional agenda to promote as SLDC. Examples include the Regional Chamber and Growth Association (RCGA), Port Working Group, Regional Business Council, and North Broadway Business Association. Partnering with these groups will allow SLDC to build upon the relationships already established as well as to make sure those groups have the information they need for inclusion in their communication efforts. Another opportunity to network will be for SLDC to designate a person or organization to participate in as many annual trade conferences and shows, seminars, meetings, workshops, and business symposiums as possible to promote the Land Use Plan. The designee will seek opportunities to join panel discussions, headline (key note speakers) events, sponsor events, become a member and staff a booth at various events. This designee should also join industry organizations to promote and educate potential investors and customers about the plan. Below is a listing of trade organization memberships to consider:

- Council of Supply Chain Management Professionals Annual Global Conference
- National Minority Supplier Development Council
- St. Louis Association of Real Estate Professionals

- Globe Street
- Coalition for America's Gateways and Corridors
- World Shipping Council
- American Trucking Association
- National Association of Waterfront Employers
- US Chamber of Commerce
- National Association of Regional Councils
- Association of Metropolitan Planning Organizations
- Retail Industry Leaders Association
- American Association of State Highway and Transportation Officials
- Association of American Railroads
- American Short Line and Regional Railroads Association
- Inland Rivers Ports and Terminals Association
- National Association of Manufacturers
- National Retail Federation
- American Association of Port Authorities
- Intermodal Association of North America
- The National Industrial Transportation League

Media Strategies – A comprehensive media relations plan to engage media outlets early and often will be a critical technique used to control the message and brand the project. Media outlets offer outstanding opportunities for accessible and in-depth coverage of a project or plan ***if*** properly controlled. A media plan designed to brand the project, inform the viewing audience of opportunities progress and monitoring misperceptions, will be developed immediately after the Land Use Plan is approved. Such strategies could include media interviews, editorials, media briefings and tours, press releases and advisories, as well as developing media kits to circulate (monthly, quarterly, and semi-annually) to ensure the project remains a featured story. SLDC staff will manage all media relations.

Creative Materials and Publications – In addition to a marketing brochure, print and online materials, the Land Use Study team will develop the initial project information, announcements, and updates. The documents will be presented to developers, carriers and logistics companies, existing and new businesses, funding sources, local and regional partners, at trade shows, media events, as well as elected leaders to garner their interest and support. SLDC should publish materials in trade publications, newsletters, trade directories, and regional business journals. Project Fact Sheets, Interactive CD-Rom (provides video, photos, 3-D images, and data on MRT terminal, port services, and inland infrastructure. Editorials (featured story), flyers, press kits, briefing kits, advertisements and displays are just a few materials SLDC should develop to promote the plan. Listed below are just a few trade publications and directories to consider:

Business Development Publications:

Consider publishing ads, articles and featured stories in large publications aimed at site selection companies who work with business to relocate, expand, etc. Larger publications

are: Site Selection w/Conway Data, Business Facility, Expansion Management Solutions and Area Development

Trade/Freight Forwarder Publications:

American Association of Port Authorities (AAPA): publishes newsletters, an annual directory and a variety of surveys and technical books including:

- *Alert Newsletter*: A weekly newsletter providing timely information of interest to ports on relevant federal legislation and regulation and related matters of concern.
- *Advisory Newsletter*: A weekly confidential digest of - news and other information of current interest to the public port industry. A Spanish-language Advisory is circulated to AAPA's Latin American Corporate members twice each month.
- AAPA Directory - *Seaports of the Americas*/*Seaport*: An annual publication offering a hemisphere-wide directory of port facilities, port personnel, port commissioners, regional port associations and port services, as well as the AAPA membership roster.

Intermodal Association of North America (IANA) Intermodal Marketplace: The Intermodal Marketplace is a digital buyer's guide that allows the ability to find intermodal-related products and services.

Project Website – A project web site/page will be developed to market to a broader audience and track investors' interest in the area. The consultant team will work with SLDC staff to initially develop material and content used to create the site/page. The site will be linked to other interest groups or entity sites, such as St. Louis City, RCGA, Urban Land Institute, St. Louis Region Port Working Group, and other industry sites. The site/page will include maps, graphics, photos, as well as incentive materials to download for public viewing and input. SLDC staff will manage the project site/page.

Social Media – Another innovative way to market and track investors' interest in the area is through social media mediums such as Facebook, Twitter, YouTube, and blog sites. Both Facebook, Twitter, and YouTube accounts will be created to engage and market to a broader audience about the Land Use Plan. The sites could offer interactive opportunities to understand investors' interest by polling or surveying the audience and posting photos that spotlight an area. If desired, SLDC can partner with other national and international social media forums such as RCGA, Urban Land Institute (ULI), and regional developers/real estate association site. Both efforts generate opportunities for real-time dialogue about the project; and real-time responses from the consultant team. SLDC staff will manage the project site/page.

TOOLS AND TECHNIQUES

Project Report	Networking	Website	Social Media	Handout Materials	Political/Media Relations	Articles/ Feature Stories
Executive Summary	Industry Trade Shows	Municipal River Terminal Site	E-blast	Project Profile Sheet	Briefing Kits	Trade Publications
Marketing Brochure	Host Summit/ Conference	Regional Chamber and Growth Association Link	Facebook	Incentive Program Sheets	Fact Sheets	Newsletter
Annual Report	Identify Project Champion(s)	Regional Business Commerce Link	Twitter	Area Fact Sheets	Press Releases	Op Editorials (Post Dispatch, Business Journal, Other Regional Papers)
	Site Tours	East-West Gateway Council Of Governments Link	YouTube	PowerPoint Template	Op Editorials (Post Dispatch, Business Journal, Other Regional Papers)	
		Other Industry/ Organization Links		Talking Points		

Phasing of each strategy and the intended targeted audiences is highlighted in Attachment A.

TARGET AUDIENCE

It is important that a targeted audience be identified as part of the marketing effort. In addition, assigning high/medium/low classifications to each target audience gives some hierarchy to how the City directs limited time and resources. Briefings were conducted with more than 20 key stakeholders who represent the NRCC area officials, business owners and development community. SLDC selected these individuals for stakeholder engagement because they have been involved in the economic development of the North Riverfront area and have a stake in the outcome. In addition to building a positive relationship, the face-to-face meetings allowed the project team to hear directly stakeholders' concerns, issues and expectations for the project. Based on conversations to date, barge and trucking seem to be aware of opportunities with not only the north riverfront, but the regional strengths. Listed below are the key stakeholders identified as targeted audiences, their designated priority level and why they are important:

High Priority

- Developers/Brokers – Incentives available to fuel business and/or job growth through building construction and expansion
- Existing North Riverfront Commerce Corridor/North Broadway Businesses – Retain current businesses and property owners
- Third Party Logistic Providers/Freight Forwarders –Service providers needed to dispatch shipments on local intermodal carriers including barge, trucks, railroads and airplanes

Medium Priority

- Manufacturers – Retain existing and attract new major business for 90,000 square feet of available warehouse space
- Agencies/Business Organizations – Retain, grow and attract major commercial and industrial companies for 800-1,000 acres of available space
- Railroads – Six one-class railroad facilities part of intermodal infrastructure system
- Trucking Companies - Part of intermodal infrastructure system with designated freight roadway corridor utilizing Interstate 70, 55, 44, 64, 270, 255 and 170

Low Priorities

- Barge Companies – Part of intermodal infrastructure system with Municipal River Terminal, access to inland waterway system and the Gulf

The North Riverfront has a long history as an urban commerce core focused on river, rail, and highway distribution along with manufacturing, wholesaling, and other business associated with inland ports. The strategies listed below will be used to carry out the overall marketing strategy applicable to all target audiences:

- Inform target audiences about the results and vision of the Port /North Riverfront Land Use Study.
- Advocate and assist in implementation of pro-business/development procedures and policies for the North Riverfront Commerce Corridor area.
- Attend/join industry and trade events/organizations.
- Work national and international intermodal, economic development, transportation, commerce, real estate development, and logistic organizations to participate as a vendor, speaker, or host to showcase area plans.
- Ensure St. Louis City facilities are listed under regional websites and marketing materials.

The next section identifies targeted audiences, marketing resources, key messages, priority levels and a timeline to implement various marketing strategies utilizing many of the tools and techniques identified in the table above. Attachment B is the "NRCC Master Stakeholder list." The list targeted audiences within the project area who are identified as representatives.

TARGETED AUDIENCE - HIGH PRIORITY

Developers/Brokers

KEY MESSAGE(S)

- **Vision for the North Riverfront**
- **Available Sites/Parcels**
- **Available Incentives**

STRATEGIES/ACTIONS

Strategy #1: Provide broker, developers, and real-estate agents "front-end" marketing sheets highlighting the vision of the North Riverfront for their own site/building marketing sheets.

Action 1.1: Distribute marketing brochure to local brokers, developers, and real-estate agents.
Frequency: Update Yearly
Marketing Approach: PDF of Marketing Brochure, Fact Sheets, Talking Points, Interactive CD-Rom, Member Tool-Kit – Press Release Template, Letter to Editor Template, Op-Ed Template, Third-Party Meeting Script, Talking points

Action 1.2: Develop and maintain marketing center and showroom where property owners and brokers bring prospective tenants and retailers
Frequency: Daily
Marketing Approach: Welcome Guide, Profile Sheets, Incentive Program Sheets, Marketing Brochure, Interactive CD-Rom and web links

Strategy #2: Inform national broker/development community on the North Riverfront Commerce Corridor Land Use Study results and vision.

Action 2.1: Meet with RCGA to review North Riverfront marketing materials and review national conferences/meetings that RCGA can attend and assist with marketing.
Frequency: Coordinate marketing materials on yearly basis, coordinate conference/meetings quarterly. Upload website/links and monitor updates.
Marketing Approach: Executive Summary Brochure, Marketing Brochure, Interactive CD-Rom, Member Tool-Kit – Press Release Template, Letter to Editor Template, Op-Ed Template, Third-Party Meeting Script, Talking points, Briefing Kits, and develop web site materials .
Key Contacts: Steve Johnson and Jim Alexander at the RCGA

TARGET AUDIENCE – HIGH PRIORITY

Existing Port/North Riverfront/Businesses

KEY MESSAGE(S)

- **Vision for the North Riverfront**
- **Commitment from City**
- **Continued Improvements in Infrastructure, Security, and Development**

STRATEGIES/ACTIONS

Strategy #1: Inform existing Port/North Riverfront/Businesses on the North Riverfront Commerce Corridor Land-Use Study results and vision.

Action 1.1: Distribute executive summary and marketing brochure to existing North Riverfront/North Broadway Businesses
Frequency: Once
Marketing Approach: Executive Summary Brochure, Marketing Brochure
Key Contacts: *See master stakeholder list.*

Strategy #2: Communicate North Riverfront Commerce Corridor Value Proposition

Action 2.1: Distribute executive summary and marketing brochure to business community.
Frequency: Yearly update to ensure latest information.
Marketing Approach: Executive Summary Brochure, Marketing Brochure, Newsletter, Fact Sheet, Interactive CD-Rom
Key Contacts: See *master stakeholder schedule list.*

Action 2.2: Maintain high level of interaction with broad array of community stakeholders that was achieved during North/Riverfront Land Use Study outreach.
Frequency: Ongoing
Marketing Approach: Special events, community meetings, project updates through web, newsletter, news stories, and media events

Action 2.3: Develop materials that underscore the North Riverfront Commerce Corridor business-friendly focus and support business development.
Frequency: Yearly update to ensure latest information.
Marketing Approach: Welcome Guide, District Profile Sheets, Annual Report, Website Updates

Action 2.4: Develop North Riverfront Commerce Corridor Services Directory - listing of over 550 companies that work in and around the Port/Riverfront district, including barge companies, freight forwarders, trucking companies, etc.
Frequency: Update Annually
Marketing Approach: Directory

Action 2.5: Provide strong and sustaining support of North Riverfront Commerce Corridor community meetings, workshops, special events and continuous project updates
Frequency: Ongoing
Marketing Approach: Website, Newsletter, New Stories, Media Events

Action 2.6: Maintain marketing campaign with electronic marketing, new print marketing and receive positive press
Frequency: Ongoing
Marketing Approach: Website Updates, Newsletter, Press Releases, E-Blast

Action 2.7: Develop and maintain marketing center and showroom where property owners and broker's bring prospective tenants and retailers
Frequency: Daily
Marketing Approach: Welcome Guide, Profile Sheets, Incentive Program Sheets, Marketing Brochure, Interactive CD-Rom

TARGET AUDIENCE – HIGH PRIORITY

Third Party Logistic Providers/Freight Forwarders

KEY MESSAGE(S)

- **Low Regional and Local Transportation Costs**
- **Center of Gravity to Customers**
- **Available Sites**

STRATEGIES/ACTIONS

Strategy #1: Work with the Regional Commerce and Growth Association (RCGA) to develop regional "Leadership Council" for multi-modal/freight to leverage regional transportation assets.

Action 1.1: Build a strong and efficient leadership council that supports North Riverfront Commerce Corridor development.
Frequency: Quarterly

Marketing Approach: Fact Sheet, Website Links and Updates, Member Tool-Kit – Press Release Template, Letter to Editor Template, Op-Ed Template, Third-Party Meeting Script, Talking points
Key Contacts: See *master stakeholder list.*

TARGET AUDIENCE – MEDIUM PRIORITY

Manufacturers

KEY MESSAGE(S)

- **Multi-Modal Advantages**
- **Access to Six Class 1 Railroads through Terminal Railroad Association (TRRA)**

STRATEGIES / ACTIONS

Strategy #1: Provide manufacturers "front-end" marketing sheets highlighting the vision of the North Riverfront.

Action 1.1: Develop a summary of economic development initiatives to help manufacturers locate to the North Riverfront Commerce Corridor**.**
Frequency: Annually
Marketing Approach: Fact Sheets, Follow-up meetings with General Manager or Plant Manager
Key Contacts: *See master stakeholder list.*

TARGET AUDIENCE – MEDIUM PRIORITY

Agencies/Business Organizations

KEY MESSAGE(S)

- **Inclusion on future Green Infrastructure Funding**
- **Promote Regional Freight**
- **Promote North Riverfront Differentiators**
- **Support North Riverfront Stormwater Strategies**
- **Support Hall Street Improvements**

- **ITS/Freight rate Improvements**

STRATEGIES/ACTIONS

Strategy #1: Ensure marketing materials about North Riverfront Commerce Corridor initiative are available for local agencies and business organizations.

Action 1.1: Develop a summary of funding, stormwater and ITS freight rate improvement initiatives to help agencies/business organizations conduct business in the North Riverfront Commerce Corridor District
Frequency: Annually
Marketing Approach: Marketing Brochure, Briefing Kits, CD –Rom, Website Links/Updates
Key Contacts: See *master stakeholder schedule list.*

Strategy #2: Communicate North Riverfront Commerce Corridor Value Proposition

Action 2.1: Distribute executive summary and marketing brochure to agency and business community.
Frequency: Yearly update to ensure latest information.
Marketing Approach: Executive Summary Brochure, Marketing Brochure, Newsletter, Fact Sheet, Interactive CD-Rom
Key Contacts: See *master stakeholder schedule list.*

Action 2.2: Maintain high level of interaction with broad array of community stakeholders that was achieved during North/Riverfront Land Use Study outreach.
Frequency: Ongoing

Marketing Approach: Special events, community meetings, project updates through web, newsletter and news stories.
Key Contacts: See *master stakeholder schedule list.*

Action 2.3: Develop materials that underscore the North Riverfront Commerce Corridor business-friendly focus and support business development.
Frequency: Yearly update to ensure latest information.
Marketing Approach: Welcome Guide, District Profile Sheets, Annual Report, Website Updates
Key Contacts: See *master stakeholder schedule list.*

Action 2.4: Provide strong and sustaining support of North Riverfront Commerce Corridor community meetings, workshops, special events and continuous project updates
Frequency: Ongoing
Marketing Approach: Website, Newsletter, New Stories

Action 2.5: Maintain marketing campaign with electronic marketing materials, new print marketing materials and positive press
Frequency: Ongoing
Marketing Approach: Website Updates, Newsletter, Press Releases

Action 2.6: Develop and maintain marketing center and showroom where property owners and brokers bring prospective tenants, retailers and business owners
Frequency: Daily
Marketing Approach: Welcome Guide, Profile Sheets, Incentive Program Sheets, Marketing Brochure, Interactive CD-Rom

TARGET AUDIENCE – MEDIUM PRIORITY

Railroads

KEY MESSAGE(S)

- **Return on Investment**
- **Available Sites**

STRATEGIES/ACTIONS

Strategy #1: Work with the railroads to develop multi-modal/freight program to leverage regional transportation assets.

Action 1.1: Develop Port/Riverfront Services Directory - listing of over 550 companies that work in and around the Port/Riverfront district, including barge companies, freight forwarders, trucking companies, etc.
Frequency: Update Annually
Marketing Approach: Directory

Action 1.2: Develop a summary of economic development improvement initiatives to help rail lines conduct business in the North Riverfront Commerce Corridor
Frequency: Coordinate marketing materials on yearly basis, coordinate conference/meetings quarterly.
Marketing Approach: Executive Summary Brochure, Marketing Brochure, Fact Sheets, Talking points
Key Contacts: See *master stakeholder schedule list.*

TARGET AUDIENCE – MEDIUM PRIORITY

Trucking Companies

KEY MESSAGE(S)

- **Access to Interstates**
- **Recent and Future Improvements**
- **New Mississippi River Bridge (MRB) project - Opening Year 2012**

STRATEGIES/ACTIONS

Strategy #1: Work with the trucking companies to develop multi-modal/freight program to leverage regional transportation assets.

> **Action 1.1:** Develop a summary of economic development improvement initiatives to help trucking companies conduct business in the North Riverfront Commerce Corridor
> **Frequency:** Coordinate marketing materials on yearly basis
> **Marketing Approach:** Executive Summary Brochure, Marketing Brochure, Fact Sheets, Talking points

TARGET AUDIENCE – LOW PRIORITY

Barge Companies

KEY MESSAGE(S)

- **Rail to River Opportunities**
- **Northern-most Ice/Lock Free Port**
- **Expanded MRT Capacity (Port Operators-New lease)**
- **Mississippi River Bridge (2014)**

STRATEGIES/ACTIONS

Strategy #1: Work with the barge companies to develop multi-modal/freight program to leverage regional transportation assets.

Action 1.1: Develop Port/Riverfront Services Directory - listing of over 550 companies that operate in and around the Port/Riverfront district, including barge companies, freight forwarders, trucking companies, etc.
Frequency: Update Annually
Marketing Approach: Directory
Key Contacts: North Riverfront Commerce Corridor Companies

Action 1.2: Develop a summary of economic development improvement initiatives to help barge companies transport goods in the North Riverfront Commerce Corridor
Frequency: Coordinate marketing materials on yearly basis, coordinate conference/meetings quarterly.
Marketing Approach: Executive Summary Brochure, Marketing Brochure, Talking points
Key Contacts: Barge Companies

Strategy #2: Ensure St. Louis City Facilities Are Listed Under Regional Websites and Marketing Materials

Action 2.1: Currently the RCGA website only lists Tri-City Port under 'Water' under regional transportation (www.stlrcga.org/x523.xml). List Municipal River Terminal, St. Louis City website, and major barge lines on website.
Frequency: Yearly update to ensure latest information.
Marketing Approach: Update website, Fact Sheets

CONCLUSION

The North Riverfront Commerce Corridor Marketing and Branding Plan will build upon the outreach that occurred during the Land Use Study phase. Strategies defined will be implemented to market a range of targeted audiences. This will help SLDC create the desired investment for growth and development in North Riverfront therefore creating jobs and stimulating profitable opportunities for the City and the region.

Attachment A

Marketing Strategies – Priority

Attachment B

NRCC TARGETED AUDIENCE WITHIN THE NORTH RIVERFRONT COMMERCE CORRIDOR

AUDIENCE	INTEREST GROUP
East West Gateway Council of Governments	Agency Partner
Great Rivers Greenway	Agency Partner
METRO	Agency Partner
Missouri Department of Transportation	Agency Partner
Board of Public Service	City of St. Louis
City of St. Louis Planning Department	City of St. Louis
City of St. Louis Police Department Precincts	City of St. Louis
City Water Division	City of St. Louis
St. Louis City Streets Department	City of St. Louis
Balke & Brown	Developer
Chapman Ventures LLC	Developer
Duke Realty	Developer
Green Street Development Group, LLC	Developer
Jones Lang LaSalle	Developer
OHL	Distributor
City of St. Louis Alderperson	Elected Official
Office of Russ Carnahan, Member of Congress, Third District, Missouri	Government
Affton Properties/Affton Terminal Services	Local Business
Cash's Scrap Metal & Iron*	Local Business
Damco/Maersk Logistics	Local Business
Elantas PDG, Inc.	Local Business
Excel	Local Business
Grossman Iron	Local Business
Ituarte & Schulte, LLC	Local Business
Kuehen & Nagel	Local Business
Lackey Sheet Metal L.L.C.	Local Business
Lange-Stegmann	Local Business
Logicos LLC	Local Business
Performance Food Service	Local Business
St. Louis Produce Market	Local Business
TriStar Business Communities	Local Business
Windstream Communications	Local Business
American River Transportation	Local Business/Barge Transportation
Beelman River Terminals/Beelman	Local Business/Freight Forward

AUDIENCE	INTEREST GROUP
Truck Company	
Bryan Cave	Local Business/Legal
American Commercial Terminal/ACL	Local Business/Logistic Provider
ARTCO	Local Business/Logistic Provider
CH Robinson	Local Business/Logistics Provider
Covidien	Local Business/Manufacturer
Dial Corporation*	Local Business/Manufacturer
Procter & Gamble	Local Business/Manufacturer
St. Louis Grain Corp (ADM Growmark)	Local Business/Manufacturer
AEP River Operations	Logistic Provider
Penske Logistics	Logistics
Ryder Logistics	Logistics
Burlington Northern Santa Fe	Railroad
Canadian National	Railroad
CSX Transportation	Railroad
Norfolk Southern	Railroad
Terminal	Railroad
The Alton & Southern Railway Co.	Railroad
Union Pacific	Railroad
Schneider	Real Estate
Grace Hill Settlement House	Social Service Agency
Gunther Salt Company	Supplier
Ameren	Utility
Laclede Gas	Utility
Metropolitan Sewer District	Utility
Trailnet	Utility
Trigen	Utility

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APPENDIX III: SUPPLEMENTAL ECONOMIC PROJECTIONS

NORTH RIVERFRONT COMMERCE CORRIDOR

Location. Connectivity. Opportunity.

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The Recommended Development Program prepared by Development Strategies for the St. Louis Port/North Land Use Study concluded with a projection of the most expected kinds of industrial land uses. That conclusion is reproduced below as Section 1 of this supplemental report. Subsequent to submittal of the projections of industrial uses, Development Strategies was asked to determine the "most preferred" such land uses based on projections of employment growth and economic output growth by industrial sector. Following Section 1 is an analysis of the projected growth rates in the United States as a whole of the sectors which are most likely to have interest in developing in the North Riverfront Business Corridor. The report concludes with recommendations on relative emphasis that should be placed on each sector by economic development officials.

SECTION 1: EXPECTED KINDS OF INDUSTRIAL USES IN NORTH RIVERFRONT

The North Riverfront already contains a wide array of business types, land uses, and economic sectors. Review of the literature and interviews with stakeholders strongly indicate that a prediction of particular types of businesses or sectors in the study area over the next 25 years is a valueless exercise. Instead, the area should continue to be positioned to attract and support a wide range of land and building uses.

In an effort to nevertheless provide a broad indicator of uses, a six-year database on business park developments in the Midwest United States was evaluated. While the data were analyzed by Development Strategies, the source of the underlying information is monthly information from Conway Data, based in Atlanta, Georgia. Conway compiles development information for the entire U.S., though this analysis relies only on the trends taking place in the Midwest. The timeframe of the information is January 2005 through March 2011. The key indicator is depicted on the following graph. It illustrates a rough weighted analysis of six characteristics of buildings developed in the industrial sectors shown on the left axis. The actual database includes information on many more sectors, but the illustrated land uses are those most likely to be attracted to the North Riverfront.[1]

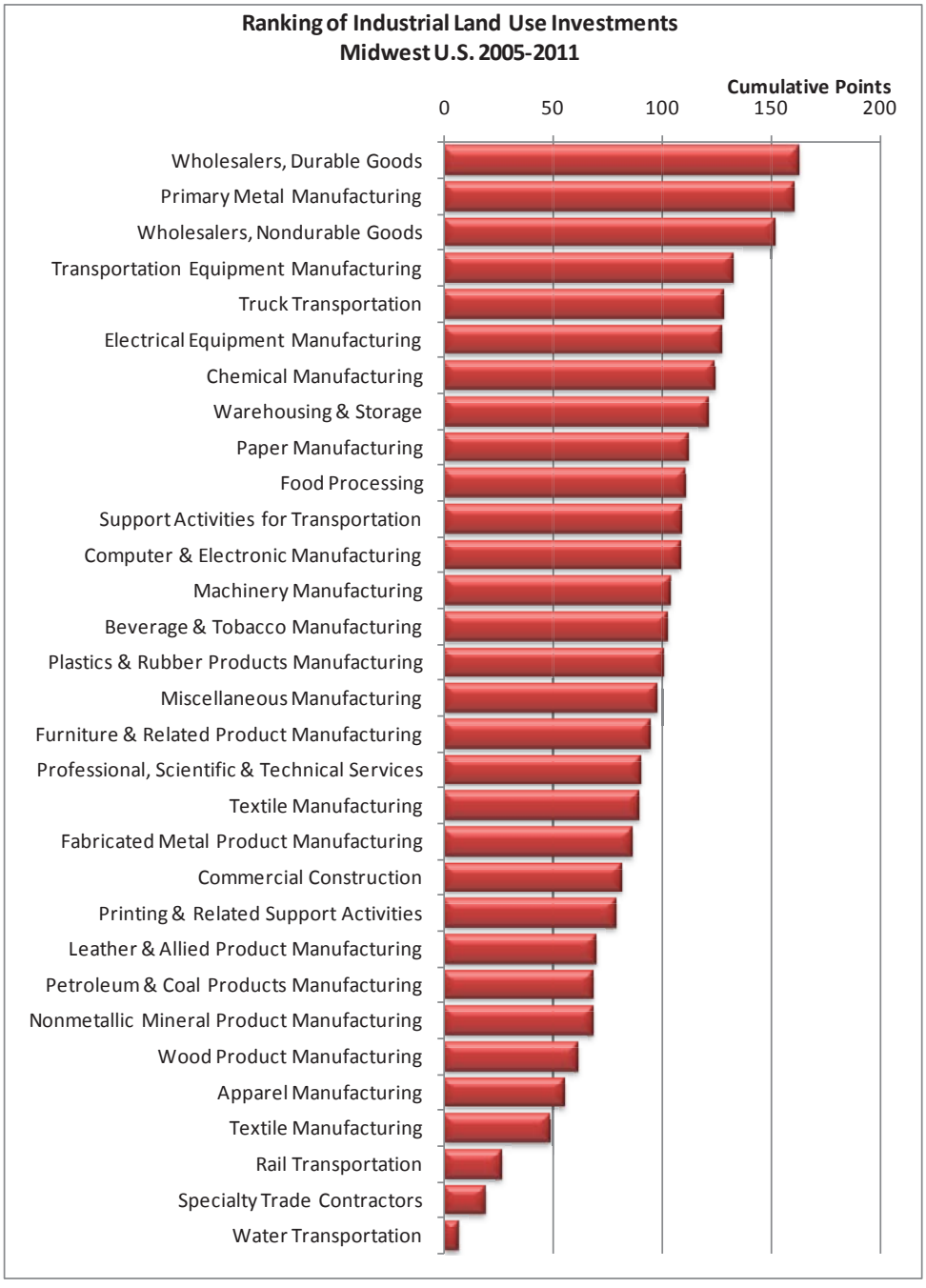
The six evaluated characteristics are:

- Dollar investment in building construction as an indicator of scale.
- Number of acres of land required as an indicator of land needs.

[1] For instance, the Conway Data show characteristics for retail stores, restaurants, hotels, and a great many uses that are typically in office buildings. While some of these uses could well be appropriate also in the North Riverfront, it was deemed most useful to concentrate on manufacturing and logistics sectors which, in turn, can help to support non-industrial sectors when demand is demonstrated.

- Employees as an indicator of job growth potential.
- Employees per square foot as an indicator of the density of jobs that might be expected.
- Building size as an indicator both of scale and intensity of land utilization.
- The overall count of constructed buildings by sector as a proxy for robustness in the sector.

The 31 shown sectors were ranked for each characteristic, with higher values then assigned to higher ranks. The graph depicts the sum of the ranking points.



In effect, the data show that buildings for wholesalers of durable goods are the most likely real estate "product" to expect in the North Riverfront. But manufacturers in the metal sectors and wholesalers in non-durable goods also rank quite highly. For the most part, these leading sectors also have a major presence in the North Riverfront today. While the fourth ranking sector, transportation equipment manufacturing, has substantially declined in greater St. Louis, the next sectors of truck transportation, electrical machinery manufacturing, chemical manufacturing, and warehousing & storage already have a strong base in St. Louis and, to a great extent, in the North Riverfront.

Therefore, directing future improvements in the North Riverfront to sectors that are already strong in St. Louis and that are already strong in the North Riverfront is likely to be a lucrative marketing strategy.

SECTION 2: EMPLOYMENT & OUTPUT PROJECTIONS AT THE NATIONAL LEVEL

Every two years, the U.S. Departments of Labor and Commerce prepare projections of jobs and output by economic sector in the nation. The projections cover ten-year periods, though the timing of the data release is such that the effect is typically a nine-year projection. The latest available projections are for the period 2008 through 2018 released in late 2009.[2] Projections are not necessarily accurate owing to the many unpredictable vagaries of the international economy, but they provide valuable insight based on a tremendous amount of socio-economic data on the prevailing forces and trends that the nation is likely to experience.

On the following page are listed the same NAICS codes shown on the previous graph. These are the sectors expected to be most interested in a location like the North Riverfront Business Corridor. The two 3-digit NAICS codes starting with the number "2" are in the construction sector. Those starting with "3" are in the manufacturing sector. Those starting with "42" are in wholesale trade. Those starting with "48" and "49" are in transportation and logistics. The one sector of "541" is for professional, scientific, and technical services.

The table indicates the compound annual average growth rates projected by the U.S. Department of Labor for employment and output (i.e., value of production) for the period 2008 through 2018. Employment projections are based on national job growth. Output projections are expressed in chained year 2000 dollars. Shown on the table, in other words, are output growth rates ignoring inflation.

The fastest growth sector by employment is projected to be "541" (professional, scientific, and technical services) at 2.96% per year, compounded, while the fastest growing in output would be "334" (computer and electronic products manufacturing) at 6.27% per year. Altogether, all of the "North Riverfront sectors" are projected to see national employment growth of 0.94% annually, slightly less than all U.S. sectors (0.97%). But these North Riverfront sectors would see *stronger output growth* than the U.S. as a whole, 3.38% vs. 2.79% annual average, compounded, until 2018.

This divergence of employment and output growth rates indicates confidence from the economists at the Department of Labor that productivity, or output per worker, will continue to increase in the nation. This means higher incomes and higher standards of living. And the sectors in the North Riverfront would experience higher average growth in productivity than the nation as a whole. This is both good news and bad news. The good news is that the people employed in the North Riverfront Business Corridor should earn

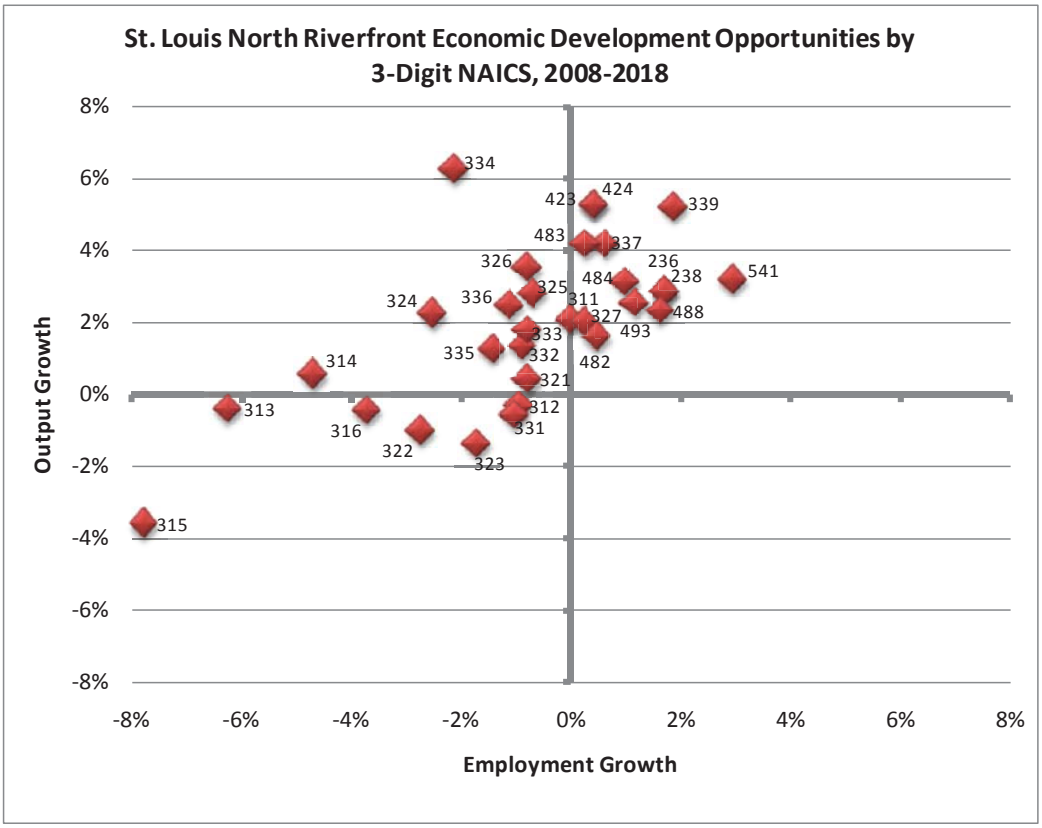
[2] The next release date is planned for late 2011 which will cover projections for the decade of 2010 to 2020.

relatively good and growing incomes. The bad news is that job growth could be somewhat sluggish as corporations obtain higher output from the same number of employees.

NORTH RIVERFRONT ECONOMIC DEVELOPMENT OPPORTUNITIES BY 3-DIGIT NAICS CODES, 2008-2018			
NAICS	Economic Sector	Compound Annual Average Employment Growth, U.S., 2008-2018	Compound Annual Average Output Growth, U.S., 2008-2018
236	Commercial Construction	1.71%	2.86%
238	Specialty Trade Contractors	1.71%	2.86%
311	Food Processing	-0.01%	2.08%
312	Beverage & Tobacco Manufacturing	-0.95%	-0.31%
313	Textile Manufacturing	-6.26%	-0.40%
314	Textile Manufacturing	-4.69%	0.56%
315	Apparel Manufacturing	-7.77%	-3.60%
316	Leather & Allied Product Manufacturing	-3.72%	-0.44%
321	Wood Product Manufacturing	-0.79%	0.43%
322	Paper Manufacturing	-2.74%	-1.00%
323	Printing & Related Support Activities	-1.72%	-1.36%
324	Petroleum & Coal Products Manufacturing	-2.51%	2.24%
325	Chemical Manufacturing	-0.69%	2.81%
326	Plastics & Rubber Products Manufacturing	-0.79%	3.53%
327	Nonmetallic Mineral Product Manufacturing	0.25%	2.02%
331	Primary Metal Manufacturing	-1.03%	-0.57%
332	Fabricated Metal Product Manufacturing	-0.88%	1.34%
333	Machinery Manufacturing	-0.79%	1.79%
334	Computer & Electronic Manufacturing	-2.13%	6.27%
335	Electrical Equipment Manufacturing	-1.43%	1.26%
336	Transportation Equipment Manufacturing	-1.11%	2.47%
337	Furniture & Related Product Manufacturing	0.62%	4.18%
339	Miscellaneous Manufacturing	1.87%	5.20%
423	Wholesalers, Durable Goods	0.42%	5.27%
424	Wholesalers, Nondurable Goods	0.42%	5.27%
482	Rail Transportation	0.47%	1.61%
483	Water Transportation	0.26%	4.19%
484	Truck Transportation	0.98%	3.13%
488	Support Activities for Transportation	1.63%	2.33%
493	Warehousing & Storage	1.17%	2.54%
541	Professional, Scientific & Technical Services	2.96%	3.20%
ALL ABOVE		0.94%	3.38%
ALL U.S. SECTORS		0.97%	2.79%
Source: U.S. Department of Labor			

But note also that 18 of the 31 North Riverfront sectors are projected to experience net job *declines* over ten years. For most intents and purposes, these declines are in the manufacturing sectors. Indeed, 18 of the 21 manufacturing sectors shown on the table are projected to see job decreases. Seven of those 18 would also experience decreases in output; these are simply becoming less relevant in the American economy.

Taking such factors into account, the following graph identifies those North Riverfront sectors that exhibit particular strengths. The horizontal axis (x-axis) shows the compound annual average rate of growth in employment between 2008 and 2018. The vertical axis (y-axis) shows the growth rates for output.



The four quadrants of the graph indicate where the North Riverfront sectors are growing in both dimensions (upper right), declining in both dimensions (lower left), or growing in one but declining in the other (upper left and lower right). Actually, there are no sectors that exhibit employment growth *and* output decline (lower right).

Theoretically, the preferred sectors for North Riverfront economic development pursuit are in the upper right quadrant where both employment and output are growing, though secondary support should be targeted for those in the upper left where employment is declining but output—or productivity—is increasing.

Note that all of the transportation, logistics, and related sectors (beginning with "4") are in the upper right quadrant. Both construction sectors are also there (beginning with "2"), along with the professional, scientific, and technical services sector ("541"). Three of the manufacturing sectors (beginning with "3") are in this quadrant, too—non-metallic mineral products, furniture products, and miscellaneous manufacturing. This later sector suggests that a number of new and smaller manufacturers in yet-unclassified fields of endeavor are not only on the horizon for the U.S. economy, but could be targeted for incubation and inexpensive space on the North Riverfront in order to encourage and nurture their growth.

SECTION 3: JOB CREATION & TARGET INDUSTRY IMPLICATIONS

Business establishments in the *job growth sectors* (the right hand side of the previous graph) can be expected to add net building space over time. They simply need more space to accommodate more employees. These sectors, therefore, represent the best opportunities for adding floor area in the North Riverfront and, therefore, the development and redevelopment of available land. These job growth sectors are noted as primary targets for economic development initiatives, incentives, and marketing on the following table.

But business establishments in *job declining sectors* are not necessarily to be ignored.

- Those that are losing both jobs and output (lower left quadrant of the previous graph) can be expected to either leave the economy altogether or to contract in size. These sectors, therefore, should not be actively targeted for the North Riverfront. That said, if a business in these sectors does expand in or relocate to the North Riverfront, so much the better. Sector-level job and output decreases do not mean that a particular business firm cannot grow or stabilize within that sector if well-managed with a strong market niche. These are noted as tertiary targets on the following table.
- Those establishments that are losing jobs but gaining productivity (the upper left quadrant of the previous graph) may not need more space and land in the North Riverfront, but they should be considered secondary targets for economic development. Gaining productivity likely means that they are gaining in profitability and value, even though they may not need as much space as previously because of job decreases. On another hand, such firms might, in fact, need more space to accommodate machinery and technology that creates the higher productivity of the remaining labor force.

A statistical analysis of the 13 sectors for which job growth is anticipated in the next decade indicates that the North Riverfront could add between 1,210 and 2,550 jobs in these sectors over the next 25 years. This is based on the previous market analysis showing two scenarios of development potential—limited and full

build-out—and assuming that the 13 job growth sectors can be responsible for all of that net build-out. These build-out projections result in between 3,375,000 and 7,150,000 square feet of added floor area in the North Riverfront.

Analyzed on the relative strength of other growth characteristics of these sectors in the Midwest industrial real estate market, and on the average amount of floor area per job, these added jobs could pay annual wages of between $65 million and $137 million after build-out (in 2010 dollar values based on City of St. Louis average wages in these sectors).3 This creates a weighted average annual wage of approximately $53,700 in 2010 dollars, virtually identical to the average wage for all economic sectors in the City of St. Louis ($53,200).

While these gains could be evaluated in light of potential job and wage decreases as implied by the national projections, the previous market analysis concluded with projections of net build-out of square feet of floor area and resulting land area needs. Thus, while there will be losses in some sectors within the North Riverfront, it is assumed that these losses will be replaced by growth sectors. Plus, there will be net additional growth as noted above.

At this time, it is impossible to project the possible decreases in jobs and increases in vacant floor area that would have to be replaced and refilled (or rebuilt). This is because the job counts and floor areas of existing businesses in the North Riverfront are unknown. The projections of net gains in wages and jobs are based, therefore, only on the overall projection of net growth in floor area.

[3] Keep in mind, however, that these 2010 dollar values for wages reflect recessionary conditions. Moreover, the projected jobs are multiplied by these 2010 wages and do not, therefore, account for (1) overall improved economic conditions or (2) increases in labor productivity. In fact, the real value of future wages in these sectors should be considerably greater than today's values.

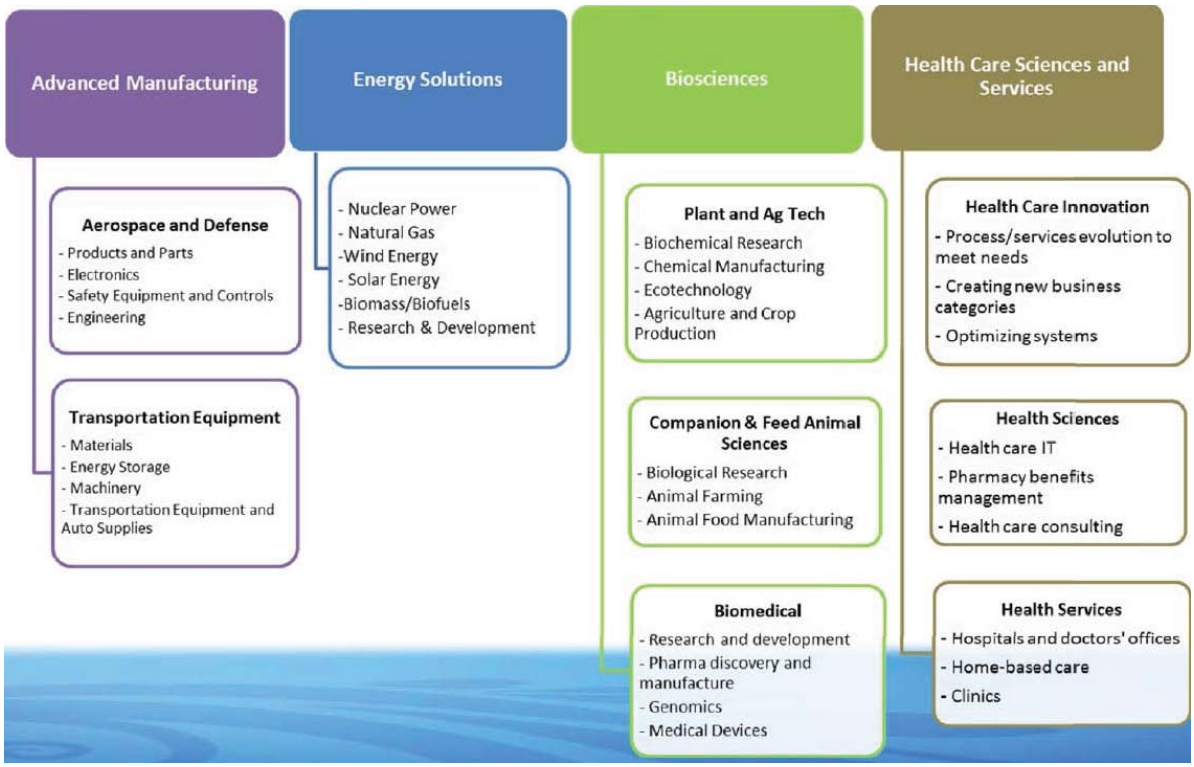
ECONOMIC DEVELOPMENT TARGETS FOR THE NORTH RIVERFRONT					
PRIMARY SECTORS		SECONDARY SECTORS		TERTIARY SECTORS	
Job and Productivity Growth		*Job Declines/Productivity Growth*		*Job and Productivity Declines*	
NAICS	Title	NAICS	Title	NAICS	Title
236	Commercial Construction	311	Food Processing	312	Beverage & Tobacco Mfg
238	Specialty Trade Contractors	314	Textile Mfg	313	Textile Mfg
327	Nonmetallic Mineral Product Mfg	321	Wood Product Mfg	315	Apparel Mfg
337	Furniture & Related Product Mfg	324	Petroleum & Coal Products Mfg	316	Leather & Allied Product Mfg
339	Miscellaneous Mfg	325	Chemical Mfg	322	Printing & Support Activities
423	Wholesalers, Durable Goods	326	Plastics & Rubber Products Mfg	323	Petroleum & Coal Products Mfg
424	Wholesalers, Nondurable Goods	332	Fabricated Metal Product Mfg	331	Primary Metal Mfg
482	Rail Transportation	333	Machinery Mfg		
483	Water Transportation	334	Computer & Electronic Mfg		
484	Truck Transportation	335	Electrical Equipment Mfg		
488	Support for Transportation	336	Transportation Equipment Mfg		
493	Warehousing & Storage				
541	Profess, Scientific & Technical Svcs				

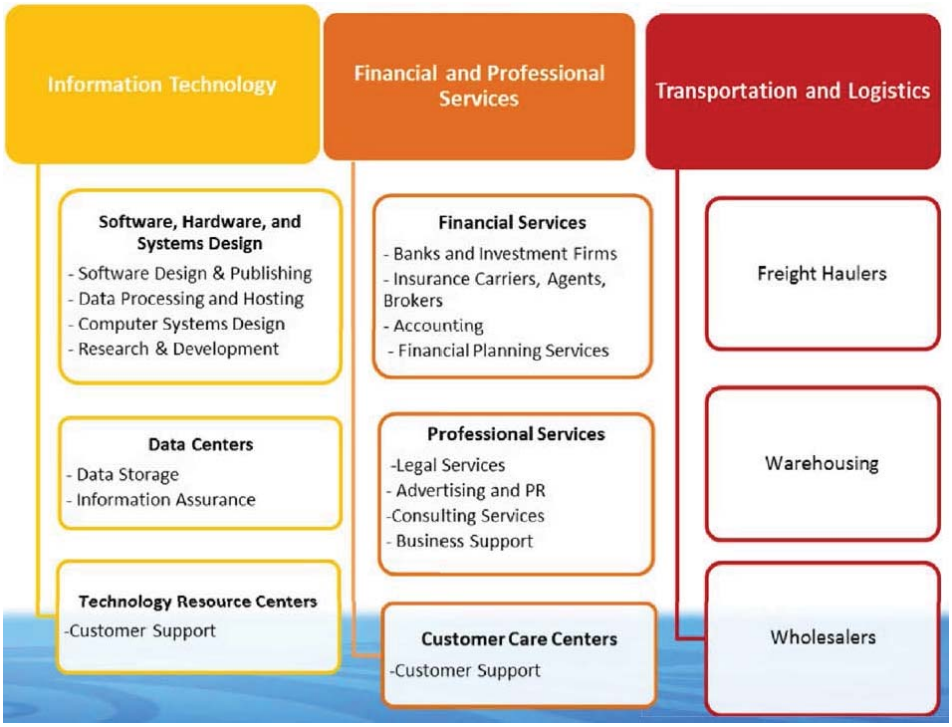
SECTION 4: MISSOURI'S STRATEGIC ECONOMIC GROWTH INITIATIVE

During 2010 and 2011, the Missouri Department of Economic Development conducted a statewide and multi-regional analysis of economic strengths leading to a strategic initiative presently being rolled out. Details of the process and findings are available on the state government web site, http://ded.mo.gov/Strategic.aspx.

Re-created on the next page are graphics representing the seven economic sectors that emerged as not only strengths of the state's economy, but targets for near-term economic development emphasis. Three of these directly relate to the findings of strength for the North Riverfront Business Corridor: advanced manufacturing, financial and professional services, and transportation and logistics.

- The **advanced manufacturing** sector is appealing primarily because the North Riverfront can offer incubator space, potentially less expensive land for development, and centrality for a well-educated and well-trained labor force necessary for high value-added manufacturing. Advanced manufacturing is most often euphemistic for the use of high-technology equipment and software to produce goods requiring precision fabrication and/or to produce goods more rapidly at substantially lower per-unit costs. While not creating as many jobs as in more traditional factories, the advanced manufacturing sector creates relatively high paying jobs because of the skills required and superior productivity, and can generate strong multiplier effects among suppliers and customers.





- A component of the **financial and professional services** sector has already been defined as a substantial opportunity for growth in the North Riverfront—the professional, scientific, and technical services sector. This is a result of both national and regional growth of these services and the presence of several major companies in the North Riverfront needing such talents either as employees or third-party advisers. Covidien is a classic North Riverfront example because of its chemical and pharmaceutical research and development requiring advanced scientific and technical skills. Engendering a work environment that is attractive for these kinds of employees in the North Riverfront is necessary for a sustainable local economy and is fully consistent with emerging state policies.

- The **transportation and logistics** sector has long been the core competence of the North Riverfront. This strength continues to emerge from a number of studies, including the present one, and meshes perfectly with not only Missouri's economic initiatives but also those that are evolving from regional economic development policies led by studies at the St. Louis Regional Chamber & Growth Association (http://www.stlrcga.org/x415.xml). The RCGA and the 16 counties of the bi-state St. Louis metropolitan area are pursuing focused economic development in five sectors: transportation and distribution, plant and medical sciences, information technology, financial services, and advanced manufacturing. The latter matches the state's focus on advanced manufacturing as well.

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APPENDIX IV: MARKET ASSESSMENT OF SERVICE STATIONS AND ANCILLARY DEVELOPMENT

NORTH RIVERFRONT COMMERCE CORRIDOR

Location. Connectivity. Opportunity.

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1.0 EXECUTIVE SUMMARY

1. Love's Travel Center, proposed for operations at North Broadway and Carrie Street in the City of St. Louis, would renovate and occupy about 14 acres of presently underutilized or vacant land. A number of market and economic issues arise from this proposed project.

2. The Travel Center's location near the Illinois border and fronting Interstate 70 just northwest of the new Mississippi River Bridge will enable it, in combination with the well-known brand name of Mobil gasoline across Carrie Street, to attract a larger number of not only local resident and commercial fuel consumers, but also travelers who will take advantage of Missouri's dramatically lower state fuel taxes.

3. Traffic counts for I-70 and North Broadway clearly demonstrate that this location is visible by a large number of travelers, both private vehicles and commercial trucks. About 100,000 vehicles per day pass the site on I-70 and another 25,000 pass the site on North Broadway. The former number is equivalent to I-44 at Grand Avenue near the Saint Louis University Medical Center while the latter number is equivalent to the traffic on Forest Park Parkway at Euclid Avenue adjacent to the Washington University Medical Center.

4. The one-mile radius market area attracts 145% more gasoline station sales than the residents in that market area purchase. This is a substantial indicator that *non-residents* are buying gasoline in this area in large quantities. The resident market spends about $5.7 million per year at gasoline stations while stations in the one-mile radius attract $14.0 million in actual sales. Thus, at least $8.3 million in sales are coming from "somewhere else."

   At a three-mile radius, there are 60% more sales than the resident market, itself, can support. At five miles, it's 10% more. Thus, the further from the site, the more likelihood there is to reach economic equilibrium between demand and supply. But it also means that the one- and three-mile market areas are dramatically out of equilibrium and could support additional gasoline proprietors.

5. Love's Travel Center projects that it will sell approximately $30 million worth of fuel sales—before taking into consideration federal and state taxes. Gasoline sales are estimated to make up about 17% of these sales, with the remainder for diesel sales to, primarily, commercial trucks.

   a. 17% of $30 million in fuel sales means about $5 million in gasoline sales, less that the surplus $8.3 million noted above.

   b. Given the likely combined drawing power of both Mobil and Love's at this location, as described further below, it is almost a certainty that the surplus sales will increase dramatically, enabling this location to attract substantially more gasoline sales from "somewhere else."

6. The separate market analysis for future reinvestment in the North Riverfront/North Broadway area, prepared as part of the North Riverfront land use study presently underway, stresses the importance of accommodating trucks and the trucking industry as a high priority. In short, trucks dominate the area, so servicing them and their owners is a crucial means for leveraging other transportation modes and for triggering reinvestment in the entire area. The Love's Travel Center is targeted specifically at the trucking sector, including the offering of alternative dining options for truckers.

7. That said, McDonald's restaurants have a universal appeal and the Love's McDonald's will be instrumental in also attracting highway travelers to the Love's Travel Center. This will help to bolster retail and restaurant sales in the corridor and will attract some diners to use Subway as an alternative. Gasoline sales

to such travelers will enhance transactions in the North Broadway corridor and bolster the tax base of the city and state.

8. We strongly suspect that the Love's brand name is not as strong an attraction for gasoline sales as the Mobil brand name. Instead, the juxtaposition of the Mobil station across Carrie Street, with its signage and consumer loyalty, will be more appealing to, especially, the private vehicle market. The existing Mobil station appears to be well-managed and attractive. We, therefore, believe that Love's—especially the McDonald's component—will help attract traffic to this general location and will enhance sales at Mobil, though precise projections of such sales are not yet possible.

9. On the other hand, the presence of Love's may also create more price competition for Mobil which, at present, dominates the local market. Thus, we would anticipate fuel sales *volume* to rise at Mobil, but fuel sales *profit margins* may decrease.

10. Residents in the one-mile radius market spend $1.43 million per year at "limited-service restaurants," the category into which McDonald's and Subway fall. But that market area attracts only about $60,000 in such sales, indicating that the market area alone could benefit from additional limited-service restaurants. These demand numbers, however, exclude passing drivers and nearby employees, all of whom will sharply increase the potential demand that could be satisfied at the Love's Travel Center.

    That unmet demand gap widens to $4.8 million in the three-mile radius area and to $6.4 million in the five-mile radius. In short, additional limited-service restaurants are needed and can be supported substantially by the resident market alone. Drivers on the interstate highway and accessibility to the thousands of nearby workers will only enhance such opportunities at the subject location.

11. While gasoline and diesel sales at Love's will not directly affect tax revenues for the City of St. Louis, other tax impacts are predictable:

    a. The $5.6 million in restaurant and retail sales per year will all be subject to the city's retail sales taxes. Local sales taxes imposed in the city total some 3.1% of retail and restaurant sales to support the general fund, capital improvements, transit, the public schools, and parks and recreation. The $5.6 million in taxable sales, therefore, would generate about $167,400 per year in local sales taxes (2011 dollars). At present, just under half of these taxes would accrue to the local sales taxing jurisdictions because of the proposed tax increment financing district overlaid on the Love's project, netting these jurisdictions (principally the city itself) some $80,600 each year until the TIF expenses are repaid, at which time the entire $167,400 will accrue annually to the City and other local districts.

    b. Love's, McDonald's, and Subway anticipate that the equivalent of 80 full time employees will work at the Travel Center for an annual payroll of some $1,996,800 (2011 dollars). The combined earnings and payroll taxes in the city would capture 1.5% of this amount each year, or about $29,950 per year. Because of the TIF district, the city is projected to net a little more than half this amount, or almost $15,000 per year, until the TIF expenses are paid off.

    c. The Travel Center is projected by Love's to have a real estate property market value of almost $4.5 million, generating about $123,000 in real estate property taxes each year (2011 dollars) for the city and many other local taxing jurisdictions. While all but $28,000 of this is captured to support TIF expenses, such jurisdictions will benefit from that larger amount when the TIF is paid off.

    d. Moreover, such jurisdictions will meanwhile share in an estimated $19,000 per year in personal property taxes generated by the Love's project—money that cannot be captured for TIF.

2.0 INTRODUCTION & BACKGROUND

Love's Travel Center is an Oklahoma City-based company that operates *Love's Travel Stops* providing fuel for cars and trucks, convenience stores, and food from national restaurant chains like Subway and McDonald's, as well as trucking supplies, Truck Tire Care centers, showers, RV dump stations, and roadside assistance. Begun in 1964, Love's was among the first to combine self-service gasoline with grocery items, offer fresh deli sandwiches, add quick-service restaurants, and sell gift and novelty items. All Love's Travel Centers are located on interstate highways.

Almost all of those locations, however, are in rural areas where, typically, such services and amenities are few and far between. Because of the company's great success in serving the trucking industry and because of the relatively few travel center amenities in the North Broadway/North Riverfront corridor in St. Louis, a Love's Travel Center is proposed for operations at North Broadway and Carrie Street. This real estate development would renovate and occupy about 14 acres of presently underutilized and vacant land, as shown below.

LOVE'S TRAVEL CENTER

Source of Photo: Green Street Development Group

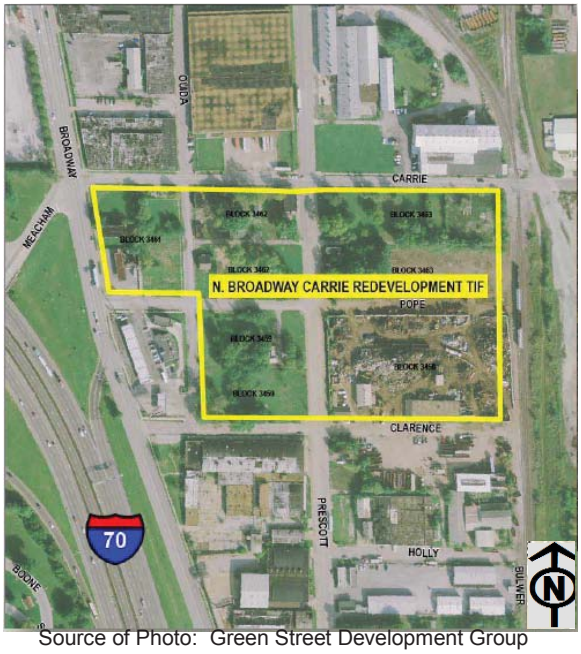
This view of the proposed site is essentially from the north looking south down the Mississippi River and Interstate 70 towards downtown St. Louis. The next map shows the site with north at the top. In both illustrations, not the "cut-out" of the rectangle otherwise formed by the Love's property. This cutout land is occupied by an existing Mobil One gas station and convenience store which also has a car wash.

Primary access to the site from the east and south along I-70 is at the North Broadway exit. Access from the west and north on I-70 is principally from onto Carrie Avenue. This latter highway access, however, is a rela-

tively long distance from the subject site and will require substantial advance signing to direct motorists to the site. Of course, that is true of most exit ramps on Interstate Highways, but any monument signs for Love's visible to east and south bound traffic will be notably distant.

The large land area for the Love's Travel Center, especially relative to the Mobil One station, is attributable to the added amenities noted above. There will be a Truck Tire Center and other services devoted to large over-the-road trucks, so a great deal of land is necessary to minimize conflicts with cars. At present, the Mobil station does not offer such scale of services to trucks, though it does sell diesel fuel in addition to gasoline.

Formally, the project area is named the North Broadway Carrie Redevelopment Tax Increment Financing District. The developer of the site, Green Street Development Group, proposes to partner with the City of St. Louis to create a TIF district that will enable some of the taxes generated by the operations of the Love's Travel Center to be redirected to the site for certain capital improvements.



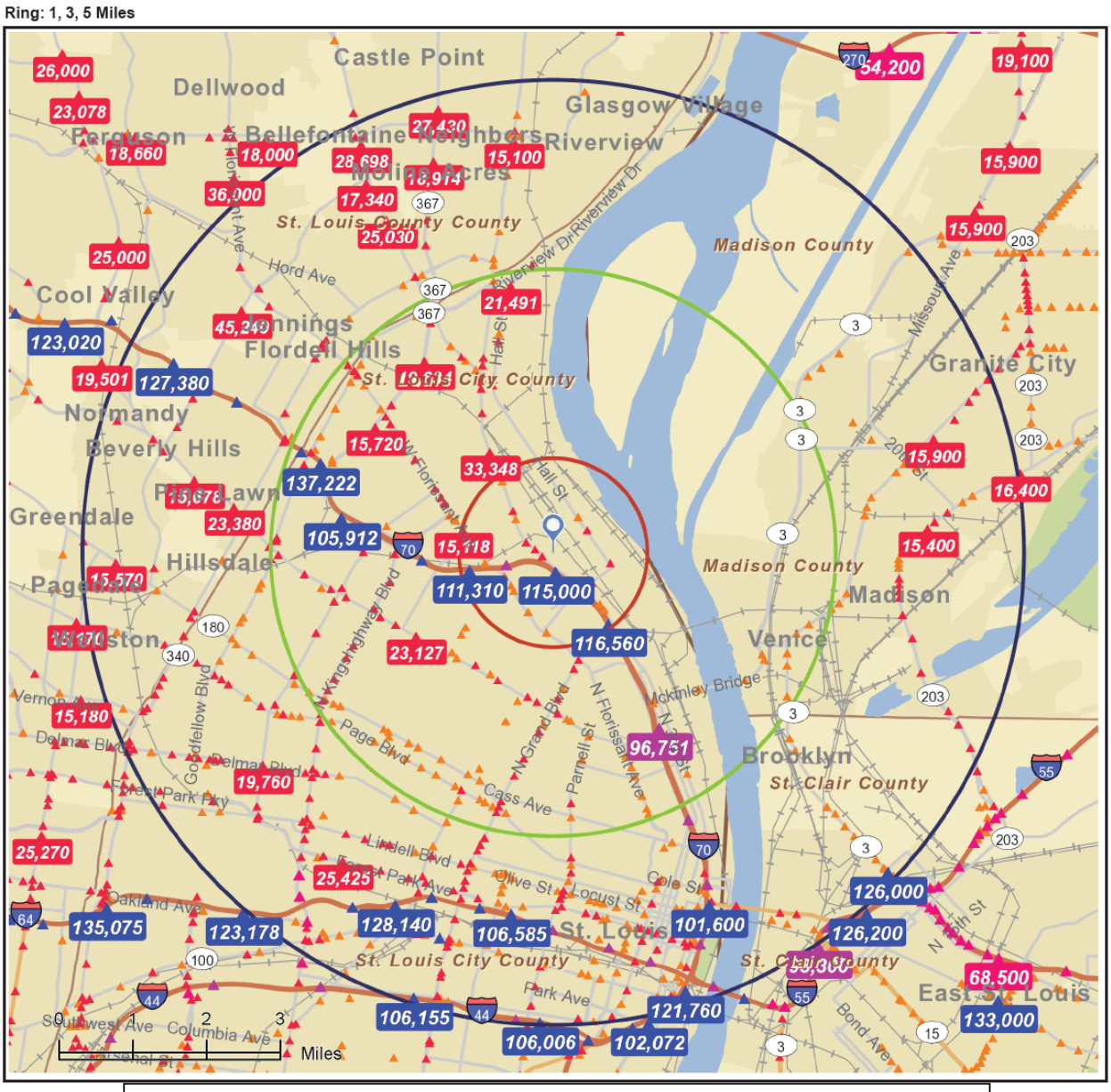
Source of Photo: Green Street Development Group

Moreover, the site is proposed as both a transportation development district (TDD) and a community improvement district (CID) under Missouri enabling legislation. This will allow the property owner and business operator to levy additional economic activity taxes to generate funds for capital improvements.

It is not the purpose of the present study to evaluate the appropriateness of TIF, TDD, and CID designations. Instead, this report is an assessment of the market potential for a Love's Travel Center at the proposed location. The report concludes with estimates of the tax revenues that the fully operational Love's Center can generate for local government.

3.0 Traffic Counts

Traffic counts for I-70 and North Broadway clearly demonstrate that this location is visible by a large number of travelers, both private vehicles and commercial trucks. About 100,000 vehicles per day pass the site on I-70 and another 25,000 pass the site on North Broadway. The former number is equivalent to I-44 at Grand Avenue near the Saint Louis University Medical Center while the latter number is equivalent to the traffic on Forest Park Parkway at Euclid Avenue adjacent to the Washington University Medical Center.



Source: ©2010 MPSI (Market Planning Solutions Inc.) Systems Inc. d.b.a. DataMetrix®

Source: ©2010 MPSI (Market Planning Solutions Inc.) Systems Inc. d.b.a. DataMetrix®

4.0 COMPETITIVE LOCATIONS

The North Broadway corridor is not without name-brand gas stations. As shown below, several stations exist along North Broadway and nearby, including the Mobil station across Carrie Avenue from the proposed Love's Center.

What is in short supply are truck service centers of scale and name-brand restaurants that are attractive to a wide range of travelers, area employees, and area residents. Truck service centers effectively do not exist in the North Broadway area while restaurants are clustered several miles away—notably along Natural Bridge Road at Kingshighway in the city. None are located along the highway. While there is a smattering of small restaurants within the North Broadway/North Riverfront industrial area, some in the Baden neighborhood well to the north, and a wide variety in downtown St. Louis, few of these are convenient to the bulk of travelers and the thousands of nearby employees.

4.1 Fuel Sales

The one-mile radius market area around the subject site attracts *145% more in gasoline station sales* than the residents in that market area purchase. This is a substantial indicator that *non-residents* are buying gasoline in this area in large quantities. The resident market spends about $5.7 million per year at gasoline stations while stations in the one-mile radius attract $14.0 million in actual sales.[1] Thus, at least $8.3 million in sales are coming from "somewhere else."

At a three-mile radius, there are 60% more sales than the resident market, itself, can support. At five miles, it's 10% more. Thus, the further from the site, the more likelihood there is to reach economic equilibrium between demand and supply. But it also means that the one- and three-mile market areas are dramatically out of equilibrium and could support additional gasoline proprietors.

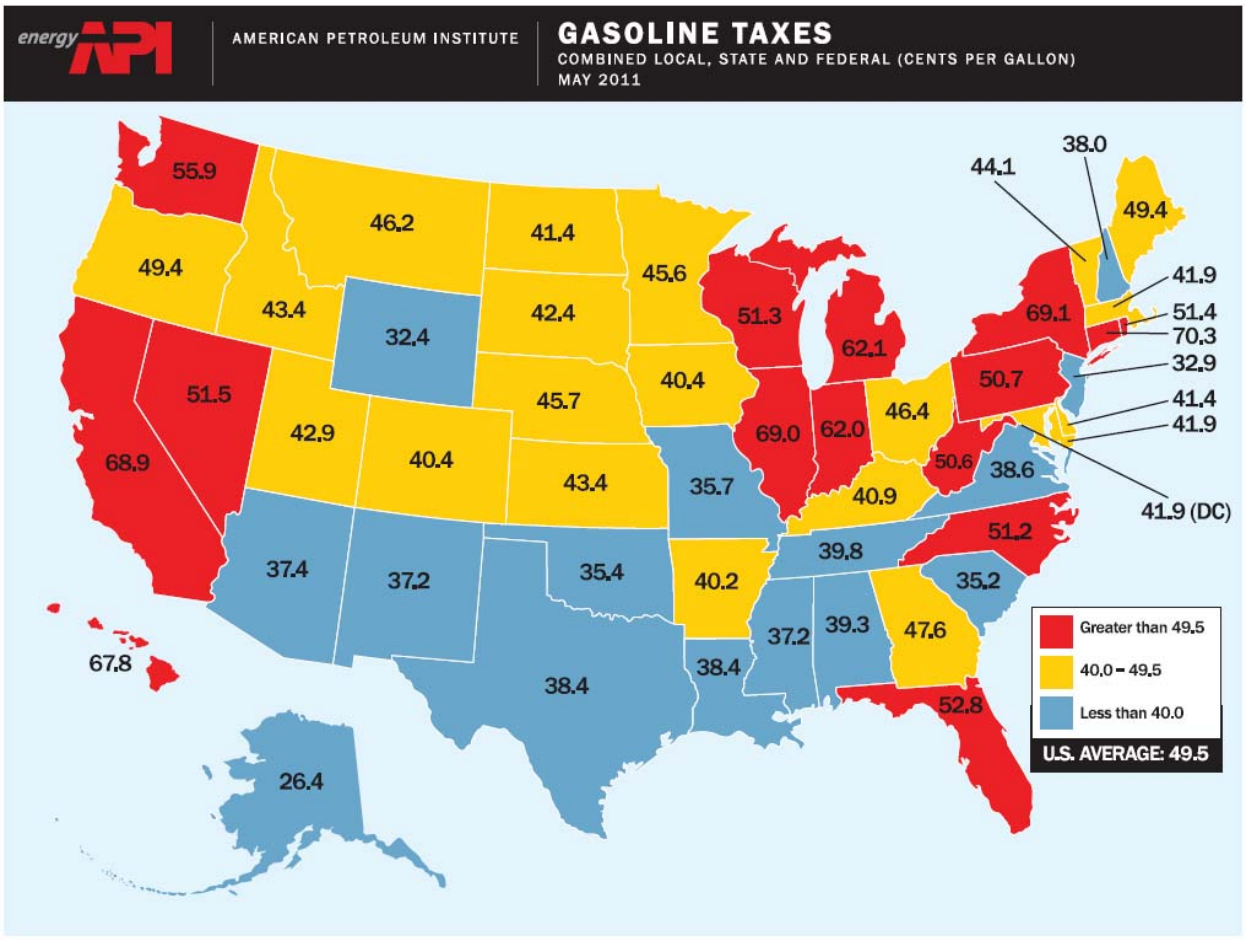
The other notable "gap" that attracts more sales than local buying power can support is in motor vehicle sales in the North Broadway area. This is not uncommon where motor vehicle dealers (new, used, and parts) are located. Indeed, there are about $13 million more in motor vehicle sales within one mile of the subject site than the local market can afford. But that gap converts to a surplus of demand within three miles as the amount of buying power expands while the number of dealers does not.

Such conversions are not found in the gasoline sales category, as noted above.

Love's Travel Center projects that it will sell approximately $30 million worth of fuel sales—before taking into consideration federal and state taxes. Gasoline sales are estimated to make up about 17% of these sales, with the remainder for diesel sales to, primarily, commercial trucks. This 17% of $30 million in fuel sales means about $5 million in gasoline sales, notably less that the surplus $8.3 million noted above. Given the likely combined drawing power of both Mobil and Love's at this location, it is almost a certainty that the surplus sales will increase dramatically, enabling this location to attract substantially more gasoline sales from "somewhere else" which we would attribute to I-70 travelers.

Moreover, the differential between state fuel consumption taxes in Missouri as compared to Illinois will be a strong lure for many Illinois residents and businesses that would otherwise be crossing the river to purchase fuel at the subject site in lieu of an Illinois location. According to the American Petroleum Institute, as of May 2011, combined taxes on fuel sales in Missouri total 35.7 cents per gallon, slightly more than half of the combined fuel taxes in Illinois of 69.0 cents per gallon. See map on the next page comparing such taxes by state. This gives Missouri locations near the state border with Illinois—and easily accessible via such routes as I-70—a distinct advantage in attracting fuel purchases.

[1] The source for all sales information in this section is ESRI, a private vendor of mapping, demographic, and economic information used frequently by Development Strategies.



The separate market analysis for future reinvestment in the North Riverfront/North Broadway area, prepared as part of the North Riverfront land use study presently underway, stresses the *importance of accommodating trucks and the trucking industry* as a high priority. In short, trucks dominate the area, so servicing them and their owners is a crucial means for leveraging other transportation modes and for triggering reinvestment in the entire area. The Love's Travel Center is targeted specifically at the trucking sector, including the offering of alternative dining options for truckers.

We strongly suspect that the Love's brand name is not as strong an attraction for gasoline sales as, say, the Mobil brand name. Instead, the juxtaposition of the Mobil station across Carrie Avenue, with its signage and consumer loyalty, will be more appealing to, especially, the private vehicle market. The existing Mobil station appears to be well-managed and attractive. We, therefore, believe that the McDonald's and Subway restaurant components of the Love's Travel Center will help attract traffic to this general location and will enhance sales at Mobil, and vice versa, though precise projections of such sales are not yet possible.

On the other hand, the presence of Love's may also create more gasoline price competition for Mobil which, at present, dominates the immediate market. Thus, we would anticipate fuel sales *volume* to rise at Mobil, but fuel sales *profit margins per gallon* may decrease.

4.2 Limited Service Restaurant Sales

Residents in the one-mile radius market area spend $1.43 million per year at "limited-service restaurants," the category into which McDonald's and Subway fall. But that market area attracts only about $60,000 in such sales, indicating that the market area alone could benefit from additional limited-service restaurants. The resulting gap of some $1.37 million would likely support a single Subway restaurant alone, or most of a typically McDonald's, though it should not be expected that all of that gap would be absorbed by the proposed Subway or McDonald's. People will and do spend their restaurant dollars in a wide variety of places.

But, these *unmet demand* numbers exclude passing drivers and nearby employees, all of whom sharply increase the potential demand that could be satisfied at the Love's restaurants. Without further research, unfortunately, we cannot more accurately estimate sales potential of the two restaurants.

Still, that unmet demand gap (i.e., more demand among residents than actually nearby sales) *widens* to $4.8 million in the three-mile radius area and to $6.4 million in the five-mile radius. This is despite the concentration of limited service restaurants noted on the previous map at Natural Bridge and Kingshighway. In short, additional limited-service restaurants are needed and can be supported substantially by the resident market alone. Drivers on the interstate highway and accessibility to the thousands of nearby workers will only enhance such opportunities at the subject location.

5.0 LOCAL GOVERNMENT FISCAL IMPACTS

While gasoline and diesel sales at Love's will likely dominate the dollar amount of revenues for the company at the North Broadway location, such sales will not directly affect tax revenues for the City of St. Louis. Simply put, there are no local taxes on fuel sales; such taxes are limited to the state and federal governments. Other local tax impacts, however, are predictable.

5.1 Retail Sales Taxes

Love's projects that it will generate $5.6 million in restaurant and retail sales per year from the convenience store, McDonald's, and Subway. The company believes that all such sales will be subject to the city's retail sales taxes. Local sales taxes imposed in the city total some 3.1% of retail and restaurant sales to support the general fund, capital improvements, transit, the public schools, and parks and recreation. The $5.6 million in taxable sales, therefore, would generate about $167,400 per year in local sales taxes (2011 dollars).

At present, however, just under half of these taxes would accrue to the local sales taxing jurisdictions because of the proposed tax increment financing district overlaid on the Love's project, netting these jurisdictions (principally the city itself) some $80,600 each year until the TIF expenses are repaid, at which time the entire $167,400 will accrue annually to the City and other local districts.

5.2 Earnings and Payroll Taxes

Love's, McDonald's, and Subway anticipate that the equivalent of 80 full time employees will work at the Travel Center for an annual payroll of some $1,996,800 (2011 dollars). This is an average of almost $25,000 per FTE employee per year. The combined earnings and payroll tax rates in the city would capture 1.5% of this amount each year, or about $29,950 per year.

Because of the TIF district, however, the city is projected to net a little more than half this amount, or almost $15,000 per year, until the TIF expenses are paid off.

5.3 Real Estate Property Taxes

The Travel Center is projected by Love's to have a real estate property market value of almost $4.5 million, generating about $123,200 in real estate property taxes each year (2011 dollars but using 2010 tax rates because 2011 tax rates have not yet been published) for the city and many other local taxing jurisdictions and a small amount to the State of Missouri. This amount includes the tax rates shown on the table on the next page.

The tax increment financing district, however, is projected to capture most of these real estate property taxes. TIF can capture up to 100 percent of incremental real property taxes excluding taxes paid to the State of Missouri (the Blind Persons Pension Fund listed on the table) and the commercial surcharge. Incremental taxes are those generated in addition to current taxes collected from the site, which are presently estimated to be $10,560 per year. So the TIF District is projected to capture about $95,100 per year (2011 dollars) when these exclusions are accounted for. The City and other taxing districts, therefore, would collect and share about $28,100 per year until the TIF debts are repaid.

2010 Property Tax Rates CITY OF ST. LOUIS		
Taxing Authority	**Purpose of Levy**	**2010 Tax Rate per $100 Assessed Valuation**
St. Louis Public Schools	Operating Fund	$3.3654
	Debt Service	0.6211
City of St. Louis	Municipal - General Revenue 1	0.1461
	Municipal - General Revenue 2	0.7178
	County	0.3113
	Hospital	0.0888
	Public Health	0.0178
	Parks & Recreation	0.0178
	Debt Service	0.1228
Library District	General Revenue	0.5208
Junior College District	General Operating Fund	0.2179
Metro Zoo & Museum District	Zoo	0.0727
	Art Museum	0.0727
	Science Center	0.0364
	Botanical Garden	0.0364
	History Museum	0.0364
Community Children's Services Fund	Service Agencies Funding	0.1880
Community Mental Health Fund	Service Agencies Funding	0.0823
Developmental Disability	Sheltered Workshop	0.1372
Metro St. Louis Sewer District	General Revenue	0.0180
	Storm Water	0.0610
Missouri State Blind Person	Blind Pension Fund	0.0300
TOTAL Residential		**$6.9187**
Commercial Surcharge	Inventory Replacement Tax	1.6400
TOTAL Commercial		**$8.5587**

5.4 Personal Property Taxes

Personal property taxes in Missouri are levied primarily against motor vehicles and commercial equipment. While it is very difficult to estimate the specific value of personal property that will be subject to such taxes at the Love's Travel Center, the typical ratio of personal property taxes to real estate property taxes for commercial enterprises is 20 percent. That is, on average, a business's personal property taxes will be the equivalent of 20 percent of its real estate property taxes, excluding the commercial surcharge.

On that assumption, Development Strategies estimates that personal property taxes generated by the Love's Travel Center will be about$19, 200 per year, in 2011 dollars. Personal property taxes are not subject to TIF, so all of that amount would accrue to the various property taxing jurisdictions noted on the table.

Assumptions and Limiting Conditions

This economic assessment and projection of impacts is subject to the following limiting conditions and assumptions:

1. Information provided by or obtained from the City of St. Louis, Green Street Development Group, Love's Travel Centers, ESRI, and various secondary sources cited herein is assumed to be reliable and accurate. However, this information cannot be guaranteed or construed to represent judgments by the consultant. Such information and the results of its application by the consultant are subject to change without notice.

2. The future course of the Missouri economy and the metropolitan St. Louis economy, as represented herein, is based on our current understanding of the market and representations made to us. The future course of the proposed Love's Travel Center improvements or growth and change in the fuel, convenience retail, limited service restaurant, and truck transportation sectors of metro St. Louis is difficult to predict and our estimates and projections are subject to change, although we deem our projections as reasonable given current information available.

3. We have analyzed the current economic conditions in the St. Louis area and have taken them into consideration in making long-term judgments. However, should the local, regional, or national economies suffer a major recession or depression, this could have a material effect on our conclusions.

4. Our analysis, opinions, and conclusions were prepared in conformance with the requirements of the Code of Ethics and Professional Conduct of the American Institute of Certified Planners and the International Economic Development Council both of which Robert M. Lewis, President and Principal of Development Strategies, is a member.

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APPENDIX V:
JOB ESTIMATES

NORTH RIVERFRONT COMMERCE CORRIDOR

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Job Estimates

There are four methods of job counts in the NRCC, three of which come very close to agreeing with one another. There is consensus that the current job count in the NRCC is **10,000**, plus or minus a hundred.

1. The project team initially used job numbers from notes taken by at stakeholder interviews. These notes were never intended to be scientific on this matter, so we shouldn't expect accuracy. Indeed, we don't seem to have consistent numbers based on these meetings. Our estimation methodology was to use these numbers, determine the land area occupied by each company, calculate an overall jobs-per-acre for these "known" numbers, and multiply that ratio by the entirety of the developed land in the NRCC. Acreage by company was provided by GIS data as part of the land data base for the study area. Not all companies on the list could be matched to land acreage because the land owner is not necessarily the company name. The resulting very small sample of four useable companies, when multiplied upward for total acreage, yields **20,443** jobs "on site."

FROM HNTB NOTES ON NUMBER OF JOBS

Company	Employees	Acres	Emp/Acre
Covidien	700	9.5	73.40
ACL	27	41.0	0.66
Grossman	120	17.7	6.80
P&G	460	33.4	13.78
Sample Average	**1,307**	**101.6**	**12.86**
Extrapolated Employee Count	**20,443**	**1,589.6**	**12.86**

2. A second method was conducted the same way but with a larger sample. This larger sample was drawn from a table obtained from SLDC using Sorkins' Directory in 2010. That list of 23 company names with employee counts was reduced to 11 useable names where we could match the company name to specific properties and acreage. This yields an estimate of **9,921** jobs "on site" (see next page).

FROM SLDC/SORKIN'S DATA 2010			
Company	**Employees**	**Acres**	**Emp/Acre**
Dial	360	24.3	14.82
Duke	75	3.2	23.15
Wunderlich Fibre Box	40	4.1	9.71
P&G	315	33.4	9.43
Covidien	300	54.2	5.53
Con-way	250	15.1	16.59
Norfolk Southern	500	130.9	3.82
American Commercial Terminals	9	41.8	0.22
Grossman	90	17.7	5.08
Lange Stegman	100	13.0	7.69
Vitro	80	1.8	45.20
Sample Average	**2,119**	**339.5**	**6.24**
Extrapolated Employee Count	**9,921**	**1,589.6**	**6.24**

3. Our GIS has a database that estimates the number of jobs within a user-defined polygon. We drew a boundary on the electronic map around the NRCC and the system estimated that there are **10,011** jobs "on site." This database breaks down the jobs estimate into broad economic sectors, but the internal methodology of those sector estimates leaves something to be desired regarding the individual sectors. We think the overall estimate is good, but there is too much volatility in the sector estimates.

4. Our fourth methodology is actually a 2010 database downloaded from the *Business Analyst* database that we often use as part of our GIS system. This is a list of every employer in the NRCC with a range of data, including jobs, sales volume, NAICS codes, and so on. But it appears to exclude public sector organizations like the City's prison and MSD. Nevertheless, it has 495 separate companies listed with employment estimates totaling **9,979** "on site."

SUMMARY:

1.	Extrapolation from interview notes 2011	20,443 jobs on site
2.	Extrapolation from SLDC/Sorkins' 2010	9,921
3.	Geographic Information System polygon 2010	10,011
4.	Business Analyst database 2010	9,979

We could throw out the high and the low estimates, leaving an average of 9,950, but estimate number 4, in particular, appears to exclude public sector jobs. So we are most comfortable concluding that there are **10,000 jobs, plus or minus perhaps a hundred so, in the NRCC**.

Job Estimates

The market study's range of potential net job increases of between 1,210 and 2,550 over 25 years would represent an easy-to-calculate 12.1% to 25.5% growth, or an annual average of between about 0.5% and 1.0%.

- The latest available projections of job growth in the entire United States from the U.S. Department of Labor are for the period of 2008 to 2018 (10 years) when jobs are expected to average 1.0% growth per year nationwide. In the prior ten years, the national job counts grew at an average annual rate of 0.7%. So the job growth potential for the NRCC is consistent with national averages in the next several years.
- The U.S. Census Bureau, moreover, projects an average annual population growth rate of the United States of 1.0% between 2010 and 2050 (40 years). Population is typically an excellent indicator of the rate of increase in the labor force, especially over such a long time as 40 years.
- Thus, the upward limit of our job growth prospects for the NRCC of some 1.0% per year, on average, is consistent with national trends and projections of jobs and population. This isn't to say that the NRCC *must* conform to national trends. If there are ways to position, market, and manage the NRCC more aggressively so that above average growth can be attracted, perhaps it becomes policy to do so.

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APPENDIX VI: HYPOTHETICAL CID MANAGEMENT PLAN

NORTH RIVERFRONT COMMERCE CORRIDOR

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HYPOTHETICAL MANAGEMENT PLAN

For

North Riverfront Commerce Corridor
Community Improvement District, Inc.

St. Louis, Missouri

MANAGEMENT PLAN

Prepared Pursuant to the State of Missouri
Community Improvement District Act
to Establish a Community Improvement District
in the North Riverfront Commerce Corridor

The information and details outlined in the following pages represents the strategies, activities, and budgets that will be undertaken during the ten-year duration of The North Riverfront Commerce Corridor Community Improvement District. It is an integral to and part of the petition to establish the North Riverfront Commerce Corridor Community Improvement District, Inc.

Section 1: What is a Community Improvement District?

A property-based Community Improvement District is based on the "benefit assessment district" model, which provides for an assessment on real property and improvements within a specific geographic district with the proceeds allocated to provide programs, services, and improvements to benefit the district and properties located within the district.

The Missouri Community Improvement District Act mandates that community improvement district services shall be in addition to existing city services and that existing city services must continue to be provided within the District at the same level as before the District was created, unless the services are also decreased throughout the City.

Community improvement district programs, services, and improvements generally focus on security, maintenance, beautification, economic development and marketing. District programs, services, and improvements may also address other areas of interest if permitted in the District Management Plan and if approved by Community Improvement District property owners as part of the authorizing petition and legislation.

The structure of a community improvement district is different from a special taxing district and offers some distinct advantages. Unlike a special taxing district, a community improvement district:

- Is established and designed by those who will pay the proposed property assessments.
- Allows a wide range of program, service, and improvement options that are determined by those who will pay the property assessments.
- Is governed by those who pay property assessments through a property and business owner dominated board that supervises operations and reviews a yearly management plan and budget.
- Is implemented by those who pay property assessments through a non-profit, private sector, management organization.
- Provides for a pre-determined term with a sunset clause that requires a new petition process by those who pay property assessments in order to renew the district.
- Requires tax-abated properties to pay full share of district assessment to support district programs, services and improvements.

There are currently over 1,500 business or community improvement districts in the United States and throughout North America.

Section 2: Why the North Riverfront Commerce Corridor Community Improvement District Should be Established

The North Riverfront Commerce Corridor has been an important center of economic growth, prosperity, and jobs since before the American Civil War. In effect, it is a large business park that must compete to survive. Business parks compete for firms and investors, not only with other city-based business centers but also with suburban business parks. Moreover, they need to create and maintain a competitive business climate to succeed in the increasingly global economy.

2011, North Riverfront Commerce Corridor property owners recognized the need to protect and maintain existing investments, support anticipated new investment, and take a more active role in determining the future of the North Riverfront. As a result, they petitioned the City of St. Louis Board of Aldermen to establish a private sector, not-for-profit management district known as The North Riverfront Commerce Corridor Community Improvement District ("District") under the Missouri Community Improvement District Act.

The District is proposed to be funded through self-assessment of properties within its boundaries to provide the financial resources to develop and implement programs, services, and improvements that work to improve the physical environment, attract, and retain businesses and employees, and encourage additional investment in the North Riverfront of St. Louis. The North Riverfront Commerce Corridor Community Improvement District Inc. will be established to:

- provide consistent funding for enhanced programs, services and improvements that support and promote a cleaner, safer and more vibrant District.
- spread the cost of programs, services, and improvements equitably among all property owners within the District.
- strengthen private sector management and accountability for programs, services, and improvements provided within the District.

Section 3: District Creation

The Missouri Community Improvement District Act requires the submission to the City of St. Louis Board of Aldermen, a petition signed by property owners whom both:

- collectively own more than fifty percent by assessed value of the real property within the District, and
- represent more than fifty percent per capita of all owners of real property within the District.

Submitted petitions are reviewed by the St. Louis City Counselor to validate signatures and verify that signed petitions represent both the required majority of all District owners and the majority of assessed value within the District. After verification by the City Counselor of the City of St. Louis, the Board of Aldermen will conduct a public hearing before adopting the ordinance to establish the District. The ordinance must then be signed into law by the Mayor of the City of St. Louis.

Section 4: Management Plan Summary

Based on the proposed District programs and services and supported by recommendations from District property owners, business owners, and other stakeholders, the District Management Plan for the term commencing on January 1, 2013 will devote a significant portion of District resources to support those programs and services that effectively and efficiently provide a clean, safe, and attractive environment for District workers and visitors.

In addition to maintaining the commitment to a clean, safe and attractive District, the Management Plan provides the District Board with the flexibility to expand or reduce programs and services as well as add

new programs and services based on changing priorities and market conditions. The District will support the goals of the *St. Louis Port/North Land Use Study* (2011) to accelerate economic development activity and substantially increase the number of businesses and jobs located in the District.

A detailed summary of District programs and services are set forth in Section 11 of this Management Plan.

Section 5: Duration of the District

The District will have a ten-year term beginning January 1, 2013 and ending December 31, 2022. The first assessment bill will be sent to property owners in late fall of 2012 and the last assessment bill will be sent in late fall of 2021. The petition process must then be repeated for the District to continue beyond the tenth year.

Section 6: Governance of the District

The North Riverfront Commerce Corridor Community Improvement District, Inc. will be established as a private, not-for-profit, 501(c) (3) management organization, and will implement the services, programs, and improvements described by this Management Plan. Budgets and work plans will be submitted annually to District property owners for review and comment; will be approved annually by the Board of Directors of the District; and will be filed with the Recorder of the City of St. Louis.

Reasonable efforts will be made to ensure that the District Board of Directors includes a balanced representation of property owners to reflect the diverse size, purpose, and location of property ownership within the District.

The District will hold two "town-hall" meetings of property owners during each fiscal year. The first will occur in late winter/early spring to review proposed budgets and consider comments from property owners. The second will occur approximately six months later to review and critique the success and application of enhanced services, programs, and improvements. Addition or elimination of programs and services or changes in scope of programs and services are subject to annual review by property owners and approval by the Board of Directors of the District.

The District will hire an executive director to provide management for day-to-day operations and implementation of the District Management Plan. Additional staff will be added as deemed necessary, and contracted services will be sought from vendors as deemed advisable.

Section 7: Location of the District

The District will be comprised of approximately 3,000 acres located between the Mississippi River and Broadway from about Cass Avenue on the south to Maline Creek on the north. District boundaries are defined as follows:

Boundaries of the North Riverfront Commerce Corridor Community Improvement District Inc.

Legal description goes here.

District boundaries should be delineated on a map designated as The North Riverfront Commerce Corridor Community Improvement District Map. *Note: this map will be developed in the future based on the participating properties in the District.*

Section 8: Assessments

Special assessments will be levied by the District's Board of Directors for each of the ten years of the duration of the District. District assessments will be paid annually at the same time as property taxes and will appear as a separate line item on the annual City of St. Louis property tax bills. The initial billing for the District will be mailed in late fall of 2012 and funds will be available to the District beginning January 1, 2013.

Section 9: Assessment Methodology

Calculation of annual District assessments is based upon gross square footage of land for each parcel as recorded with the City of St. Louis. No assessments will be charged against the floor space of any building or other improvements on the property. The per-square-foot rate will be established for all properties in the District and will not be affected by size, use, or value of property.

Section 10: Assessment Rate

Annual assessments are based upon an allocation of specific program, service, and improvement costs and a calculation of total assessable square footage of land. The projected assessment rate in the initial year (2013, taxable in the fall of 2012) of the District is $0.036 (3.6¢) per square foot of land. The District assessment may be adjusted on an annual basis to secure funds for increased expenses or the expansion or addition of services, programs, or improvements authorized by the Management Plan and approved by the Board of Directors. The maximum cumulative increase in assessment over the ten year term may not exceed an amount equal to a 4% average increase per year.

Assuming an increase of 4% per year, the assessment rate per square foot of land during each year of the full term of the District would be as follows:

2013	2014	2015	2016	2017
$0.036	$0.038	$0.039	$0.041	$0.042

2018	2019	2020	2021	2022
$0.044	$0.046	$0.048	$0.050	$0.052

If the Board of Directors of the District approves an assessment rate increase of more than 4% in any individual year during the ten-year term, the Board of Directors of the District would then be required to proportionately lower assessment rates in other years so that the total increase over the term does not exceed a 4% annual average. The rate shown for 2022 reflects the maximum assessment rate that can be charged during the ten-year term.

Section 11: Summary of District Programs, Services, & Improvements

Programs, services, and improvements listed below are anticipated for in the District Management Plan that will take effect January 1, 2013. Over the District's ten year term, the Board of Directors of the District may elect to reduce, eliminate, expand, or add services and programs based on changes in District priorities and market conditions.

1. Security and Maintenance

A. Security

Security programs, services, and improvements are dedicated to reducing crime and improving perception of public safety in the District while offering a customer service orientation to employees and visitors to the District. Security programs and services include:

- Supplemental Police Patrols
  Through a Police Assistance Agreement with the St. Louis Metropolitan Police Department, the District will fund overtime pay for extra patrols, special events, or additional traffic or security details.

- CCTV Security Cameras
  The District will install and maintain closed circuit television cameras at selected locations (increasing number of locations as resources permit) to monitor known trouble spots.

- North Riverfront Private Security Unit
  These highly visible patrols in clearly marked North Riverfront Commerce Corridor vehicles will help to deter crime and increase the sense of security in the District. The District will support the cost of uniforms, supplies, and training, for these individuals.

- Communication Exchange Network
  The District will help to establish a two-way, 24/7 dispatch and radio network between the St. Louis Metropolitan Police Department, District buildings and businesses, and security personnel throughout the District. The Network will monitor the police scanner and manage two-way public safety and emergency response between the District strategic locations in the District.

B. Maintenance

Maintenance programs, services, and improvements are dedicated to improving the physical environment through enhanced cleaning and maintenance of public spaces. Maintenance programs and services include:

- The Clean Team
  The Clean Team will be a five-day a week, full-time cleaning crew and appropriate machinery that removes trash and debris from curbs, gutters, and other public areas throughout the District. The District will provide a "hotline" for quick response to special clean-up issues.

- Graffiti Removal

Special Clean Team employees will remove street level graffiti, paper signs, handbills, and other physical defacement from buildings, utility boxes, poles, and other public property visible from the street and sidewalks. All such "tags" will be removed within 24 hours of reported observation.

2. Economic Development and Marketing

A. Economic Development

Economic development programs, services, and improvements will be dedicated to supporting economic activity and improving the vitality of the North Riverfront Commerce Corridor by attracting and businesses and expanding the workforce within the District. Staff and board members will work with city and state officials, developers, property owners, businesses, banks, brokers, and other stakeholders to promote and support development and investment in the District. Economic and housing development programs and services will include:

- Market Research, Analysis and Distribution
  Collection, analysis, and distribution of data on buildings, businesses, and workers; tracking investment and development; monitoring market conditions; producing Annual Progress Reports and Occupancy Reports; conducting bi-annual business and employee surveys; and maintaining an interactive website for distribution of market data.

- Office /Retail Development, Retention and Recruitment
  Work with developers, property owners, brokers, commercial tenants, and city officials to identify and support opportunities for business recruitment and retention, and job growth. The District will track building leases and space inventory, provide on-line commercial space search, and produce targeted advertising and special events to promote commercial space and business awareness.

B. Marketing

Marketing programs and services will be dedicated to informing and engaging businesses, stakeholders, and media in the continuing revitalization of the North Riverfront Commerce Corridor. Advertising, public relations, media relations, and social media will be used to provide consistent, strategic communications internally to businesses and employees, and externally to and through broader media. Communications will be intended to shape an overall image and build awareness of specific offerings within the District. A branding and marketing strategy will be developed and integrated into all District marketing and communications. Marketing services support all District initiatives, programs, and events and will include:

3. Opportunity Fund

Opportunity Fund programs, services, and improvements will be dedicated to providing the District with additional resources to strategically address new challenges and opportunities that occur over the ten year term without compromising sufficient support for existing programs and services. This fund can be used to expand existing programs and services; fund one-time expenses; purchase equipment; or underwrite the cost of new initiatives, especially those that support the recommendations of the *St. Louis Port/North Land Use Study*. The Opportunity Fund can be used for one or more programs, services, and

improvements. Funds can be spent in full each year or carried over in part or in full to future years but must be spent in its entirety by the end of the ten-year term.

4. Contracting Of District Services

Subject to the limitations of the Missouri Community Improvement District Act, the District may contract to provide any or all of these programs, services and improvements to property owners not located within the District under the following criteria:

- Properties to receive services must be adjacent to the District.
- Properties to receive services must include whole blocks or multiples of blocks.
- There is no subsidy by the District for any portion of the service.

Section 12: Operating Budget

2013 Operating Budget Summary
The total budget for all District programs, services, and improvements during the first year of operation is estimated at $X,XXX,XXX. This budget is made up of the following major budget categories:

Security and Maintenance
The 2013 budget for security and maintenance programs, services, and improvements is $XXX,XXX. This represents XX% of the total District budget for 2013.

Economic Development and Marketing
The estimated 2013 budget for economic development and marketing programs, services, and improvements is $XXX,XXX. This represents XX% of the total District budget for 2013.

Opportunity Fund
The estimated 2013 budget for the opportunity fund programs, services, and improvements is $XXX,XXX. This represents XX% of the total District budget for 2013.

Administration
The estimated 2013 budget for non-personnel administrative costs including office rent, insurance, utilities, supplies, etc. is $XXX,XXX. This represents XX% of the total District budget. Personnel and non-personnel administrative costs are allocated proportionately against all budget categories and included in budget totals for each of those categories.

Section 13: Budget Adjustments

During the term of the District, any annual surplus or deficit will be carried forward into the following year's budget. All line item expenses or specific programs, services and improvements are subject to annual review by property owners and the Board of Directors. Programs, services, and improvements may be reduced, expanded, or eliminated based on a change in priorities or new challenges or opportunities that may arise during the term of the District. All changes are subject to approval by the Board of Directors. However, while individual line item expenses or specific services, programs, services, and im-

provements may be reduced, expanded, or eliminated, the total budget for each of the three major expense categories may not be reduced by more than 10% from year to year.

Section 14: Government Property

The City of St. Louis, the State of Missouri, and the Federal Government are excluded from the provisions of the Missouri Community Improvement District Act and will not be assessed for property owned within the boundaries of the District. The District anticipates, however, that it may enter into contracts or cooperative agreements with one or more of these agencies for specific services concerning their respective properties within the District so that programs, services, and improvements can benefit government properties, as well. The District will not subsidize the delivery of these services to these agencies.

Section 15: Continuation of City Services

All services provided by the District are above and beyond those currently provided by the City of St. Louis. The Missouri Community Improvement District Act states that:

The governing body of the municipality establishing the district shall not decrease the level of publicly funded services in the district existing prior to the creation of the district or transfer the financial burden of providing the services to the district unless the services at the same time are decreased throughout the municipality, nor shall the governing body discriminate in the provision of the publicly funded services between areas included in such district and areas not so included.

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APPENDIX VII: MUNICIPAL RIVER TERMINAL LEASE ANALYSIS

NORTH RIVERFRONT COMMERCE CORRIDOR

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Lease Analysis

The objective of the lease review was to assess the competitiveness of the lease terms, benchmarked against comparable leases and industry best practice. The leases reviewed as part of this task were the 1988 and 2010 agreement between the City of St. Louis (the City) and the Port Authority Commission of the City of St. Louis (the Authority) and the 1988 agreement between the Authority and Beelman River Terminal (the Operator).

It is understood that the Authority is interested in looking at alternative strategies and lease conditions in anticipation of developing a new agreement with an Operator for activities to commence in 2012.

The lease analysis focused on commercial, operational, technical and financial aspects of the existing leases.

The findings of the analysis, including pros and cons of the existing leases as well as recommendations to better optimize the lease terms, are presented in the following sections.

EXISTING LEASES

The 1988 agreement granted the Authority land and mooring rights for the NRCC parcels for twenty-five years in exchange for $1 per year. These rights were extended for the period 2012 – 2037 in the renewed agreement signed March 30, 2010. As per the terms of the agreements, the Authority must make improvements based on the availability of funding and all awards (sub-leases) must be awarded to the highest and best bids. In addition the City's Board of Estimate and Apportionment has approval rights over all award of sub-leases.

The agreement between the City and Authority also includes a series of Standard Provisions for leases of wharf land and mooring rights that are subsequently passed through to any sub-lease. These include base rate rentals for land and mooring and specific schedule intervals for adjustment within a ceiling, requirements for insurance coverage, and other requirements.

Development of new structures or major alterations must comply with the plans and specifications and be approved by the City's Board of Public Service. The 2012 agreement retained the Standard Provisions from the 1988 agreement, but updated a number of provisions, namely the amount and type of insurance to be carried, as well as more stringent requirements for adherence to environmental regulations and limits to certain types of activities.

The Authority in turn has an agreement with the Operator. The original agreement commenced in 1988 and granted the Operator rights to operate the terminal until 1995 with 3 five-year extensions. In 2010, the agreement was amended to extend the terms of the lease through March 16, 2012. The agreement outlines investment requirements, maintenance activities, and some operating conditions. It is assumed that the existing lease reflects the typical contractual arrangement the Authority structures with its lessees.

EXISTING LEASE ANALYSIS

The table below describes the existing terms and requirements in the agreements reviewed. It summarizes the pros and cons of the existing lease structure. In addition, it summarizes the implications of the current approach to the Authority as well as alternative strategies that might be pursued. These alternatives are based on industry best practices at facilities operated by leading U.S. authorities. Due to commercial sensitivity surrounding lease agreements, the alternatives cited are illustrative examples.

Lease Aspect	Description of Lease Terms	Discussion of Lease Terms
Commercial: *volumes expected to be handled over time in relation to projected demand*		
Volume and handling requirements	There are no commercial requirements or targets contained within the agreements. The Operator agrees to carry out a full scale terminal operation at all times and utilize the premises to the fullest extent possible. The existing lease terms are understood to be based solely on a fixed rate linked to total land area and length of mooring.	Pros: The Authority has a guaranteed revenue stream that is insulated against economic downturns. A steady cash inflow can benefit budgeting and overall project planning. Cons: A fixed rate may not maximize the facility's full potential. The Agreement may undervalue the revenue the Authority could be capturing. Major Risks and Impacts: The Authority fails to realize the full potential for revenues. The impact is decreased funds available for investment in other projects. [Medium] Recommendations and Best Practice to Mitigate Risk and Increase Opportunity: An alternative approach that might be considered, and which is in place at industry-leading port facilities, is to structure an agreement that combines fixed ground lease rates with payments linked to cargo handling. Starting with a strategic plan that considers physical limitations, available technology, labor rules, and other constraints, the Authority develops a realistic assessment of volumes that could be expected, given consideration of the facility's size and market demand. The agreements are then structured to incentivize the Operator to maximize productivity and potential of the facility. This

		brings increased revenues to all parties, but also supports the Authority's interests to promote overall economic development and job creation. Authorities can also structure agreements that commit Operators to meeting a guaranteed minimum volume. The basic rental price is associated with cargo handling up to the minimum. Should the Operator fail to meet the guarantees for specific periods of time, the agreement could be terminated. Payments set per box or per unit of cargo are also included in the agreement. Typically, these throughput rates are tiered and inversely correlated to the volume handled to incentivize the Operator to maximize throughput because the per unit operating cost decreases as the volumes handled increase.
Operational: *assessment of existing, and projected future, equipment to be used at the facility in addition to labor agreements and the impact of these factors on realistic cargo-handling productivity*		
Operational requirements	In the existing agreement, the Operator is to provide, operate and maintain necessary merchandise and cargo handling equipment and other equipment as necessary for proper terminal operation. The operational requirements contained in the existing agreements are limited to the Operator providing merchandise and cargo handling equipment, but specific types or operating practices are not explicitly stated. This includes suitability and capacity for the existing infrastructure to physically support the safe operations and handling of equipment. A requirement that would have limited the type of equipment by weight able to be operated was removed from the Agreement.	Pros: Were the Authority to specify equipment types or make operating requirements too onerous or expensive, the Operator would likely factor this into lease negotiations, and the Authority may find itself unable to capture the lease rates it seeks. By leaving the agreement terms flexible, the Authority allows the Operator to make decisions based on its expertise and what its users are seeking. Cons: At the same time, by leaving operating terms too flexible, the Authority may miss opportunities to improve terminal performance. The Operator may avoid upgrades or investment that would otherwise benefit the Authority, the community or the facility's overall operations. Major Risks and Impacts: The facility's full potential and ability to meet future demand is not realized because the Operator wants to minimize its investment. [Low - Medium] The Authority may be at risk for structural repairs to docks arising from wear and tear from use of equipment that is not appropriate to the existing structure. [Medium-High] Recommendations and Best Practice to Mitigate Risk and Increase Opportunity: Related to the concept of establishing agreed throughput requirements, the Authority might

		consider more explicit operating targets or requirements as a means of maximizing the facility's potential and for furthering specific Authority policy objectives. Development of a new bid presents the opportunity to link the Authority's strategic goals to the Operator's activities. For example, based on its commercial assessment and strategic plan, the Authority may outline productivity targets or equipment types that it would like to see deployed at the facility. These should be linked to the structural condition and safety requirements. The Operator may counter with different targets or equipment based on its understanding of the market, its business plan and its financial capacity for investing. Through negotiations, the Authority and Operator can agree to operating strategies. Some Authorities have specific environmental performance requirements related to equipment operations and resultant air quality and emissions impacts.
Technical: *sharing of responsibilities between the terminal operator and the Authority for capital construction, ongoing maintenance, and hand-back provision.*		
Approvals for site improvements	All site plans must be coordinated with and approved by the Authority and the City's Board of Public Service.	Pros: The approach of sharing of capital improvements and maintenance activities between the Authority and Operator is typical of most agreements. This approach helps to align interests and in some cases, ensures that work the Authority wants undertaken but that the Operator may not otherwise have performed, is completed. Cons: The Authority might not be aggressive or explicit enough in its expectation for Operator investment and performance. The language defining the requirements and responsibilities for the Operator's performance of maintenance and improvements is vague and in some cases leaves determination to the Operator. Similarly, the penalties for failing to perform required activities are weak. In addition, the ongoing level of oversight and involvement that the Authority sets out may be higher than necessary. The greater level of involvement the Authority is perceived to have in oversight and involvement, the more the Operator will factor such costs into its lease negotiations as a financial risk. Greater
Capital improvement requirements	All capital improvements and facilities installed on the property that are not moveable ultimately become property of the Authority and a part of the terminal facilities. The Authority's agreement with the City requires it to make necessary improvements subject to the availability of funds. In the agreement with the current Operator, the cost of certain then-current capital improvements were to be shared equally between the Operator and the Authority, and were to be completed by a set date approximately two years into the lease. These included improvements to or demolition of existing structure, capping of the north and south docks, and installation of bumpers or fenders to protect the docks from barges. In addition, by the same deadline, the Operator was to fully fund repairs or new construction of an outbound bulk barge loading system including a barge winch system. The Authority is responsible for any future structural repairs of the dock except where the Operator or users cause damage. The Authority was to have made repairs to south dock and the Operator was to have performed a baseline inspection prior to commencement of the agreement.	
Maintenance	On a quarterly basis, the Operator is required to	

responsibilities	submit a schedule of capital improvements and maintenance items of the previous 3 months. The Authority is to perform quarterly facility inspections or maintenance and repairs. In the existing agreement between the Authority and the Operator, the Operator is responsible for normal maintenance, repairs, general care and cleanliness of the facility. This is defined as maintenance and repairs due to normal wear and tear or aging of the buildings and structures. The Operator is responsible for repairs to the structures or dock surfaces due to damage to misuse or negligence. The agreement does not provide clear definitions for asset condition and triggers for required maintenance. The Operator is also responsible for capital improvements necessary for operation of a "first class terminal facility." Improvements are based upon increased usage and need for improved linkage for truck and rail transportation "as deemed necessary by a prudent terminal operator". In the existing agreement between the Authority and the Operator, the Operator and Authority will share equally repairs to existing structures such as warehouses, roof replacement, siding replacement, sand blasting and painting, attached equipment and fixtures, liquid tanks and related equipment and controls, insulation relining, and installation of retaining dikes for existing tanks. The Operator must perform an annual marine survey of the safety of facilities under operation.	levels of involvement from the Authority may also increase demand on its resources – financial and personnel – that could otherwise be shifted to the Operator. <u>Major Risks and Impacts:</u> The Operator fails to perform maintenance and make investments. As a result, the physical condition deteriorates. With no hand-back condition requirements placed on the Operator, and weak enforcement mechanisms during the life of the lease, the Authority is at risk for significant capital improvements. [High] Resource or staff constraints at the Authority impact its ability to perform quarterly inspections and monitoring activities and ultimately to enforce Operator's fulfillment of maintenance activities. Facility condition deteriorates. [Medium] <u>Recommendations and Best Practice to Mitigate Risk and Increase Opportunity</u>: The Authority may pursue more aggressive requirements for Operator investment, performance standards, maintenance planning and performance, and hand-back conditions. The Authority may also pursue alternative strategies for asset management that are less hands-on approach in terms of frequency of reporting and monitoring, in efforts to lessen demands on Authority staff, while also outlining clear requirements and associated penalties for the Operator to uphold obligations. Common practice within the industry is to require a minimum level of investment and a timeline for construction as conditions of the agreement. At major East and West Coast facilities, this can be in the hundreds of millions of dollars and provides a way for the Authority to advance key infrastructure investment in a more timely manner than they may have otherwise have been able to fund. To incentivize timely completion, the ground-lease may have a time provision such as free rent or lower rent during the first few months during construction when the Operator has higher cash outflows to its contractors. Rent escalations set in after a set date, regardless of project completion, so it is in the Operator's interest to complete work and commence full operations to generate income. There are alternative strategies to
Hand-back provisions	The Agreement between the current Operator and the Authority does not contain hand-back requirements. The former Operator (pre-1988 lease) was supposed to clean up and remove any debris prior to vacating; otherwise the Operator would be required to do so.	

		maintenance requirements. Specific condition requirements are defined, as well as periods within which the Operator is required to correct any deficiencies. A number of Authorities put the requirement and the resourcing demands back onto the Operator to hire licensed professionals to perform periodic inspections or condition surveys [annual, every five years or other] and to submit reports detailing deferred maintenance to bring improvements into condition required by lease and future maintenance requirements for the next 5 years. This supports medium-term planning and allows activities to be coordinated with other master planning and investment activities. Other Authorities undertake regular inspection cycles themselves but require the Operator to cure any deficiencies identified. Failure by the Operator to take action can result in liquidated damages. In some cases, where the Operator fails to make required investments or to cure the deficiency within an allotted timeframe, the Authority may have the right to have the work performed and bill the Operator/Tenant at cost. A typical requirement in many long-term operating agreements is hand-back requirements. Some Authorities require at a minimum that a condition assessment be undertaken, potentially splitting the cost with the Operator. Other agreements define asset conditions that must be met, and include a condition assessment for a specified number of years. A security deposit or reserve fund may be maintained by the Operator to fund likely required improvements. This protects the Authority from being left with deteriorated assets that may leave it in a disadvantaged position in future negotiations and saddle the Authority with large capital investment requirements.
Financial: *land-lease and throughput-related components*		
Base rental rates	The Standard Provisions in the Agreement between the City and the Authority that will commence 2012 set ground lease rates of $0.0750 (current adjusted base rate $0.1575) per sq ft land, $7.50 (current adjusted base rate $15.75) per linear ft of mooring. These rates can be adjusted at 5-year intervals starting Jan 1, 2014. Increases to the rate must be proposed within 180 days prior to Jan 1 and a public hearing with notice to public and users of land/mooring rights is	<u>Pros:</u> The advantage of such a lease structure relates to the stable income stream noted previously. <u>Cons:</u> There may be unrealized potential for the Authority to unlock and recoup value through development of a new agreement that links to the market assessment underway, seeks a more equitable distribution of financial gains,

	required. The maximum adjustment is 25% of base rates and if greater than 15%, requires resolution from City Board of Aldermen. Adjustments are cumulative. There is no clear link between the current rates set forth in the Standard Provisions included in the Agreement between the City and the Authority, and the market demand or facility operating costs including cost recovery of any capital cost investment. In addition, it is understood that there are no restrictions on the user fees the Operator may charge.	and better supports the Authority's strategic goals. As the agreement between the City and Authority specifies ground lease and mooring rental rates that are passed through to the Operator in the Standards and Provisions, any potential changes to future strategy require consultation with the Authority's legal advisors. The existence of such fixed rates mean the Authority may have missed opportunities to reach out to interested parties to seek proposals and truly maximize industry input and potential for getting the best financial terms in its lease. In addition, if the rent rates are fixed, how is the "highest and best bid" being defined? If the Operator is required to charge uniform user fees to all facility users, it may have restricted ability to negotiate rates for increased volumes that would support broader economic development objectives. There needs to be balance in protecting the public and ensuring all interested parties have access to what would otherwise be a public facility, but any limitations to an Operator's ability to negotiate in the market will ultimately decrease the facility's, and ultimately the Authority's ability to generate revenue. <u>Major Risks and Impacts:</u> The Authority may not have maximized its potential return on its investment at the facility in terms of commanding as high a lease rate or financial agreement as the market may bear. [Medium] The Operator may be limited in its ability to negotiate with and attract users that might diversify the commodity types being handled to bring greater resiliency to the facility, or in some other way benefit the facility or community. [Low – Medium] <u>Recommendations and Best Practice to Mitigate Risk and Increase Opportunity</u>: The throughput linked rental structure previously described is one approach that might be considered. A related alternative for consideration, and employed by other Authorities, is a gross revenue sharing structure. As an example, the Operator would be expected to pay a percentage of gross income or revenues from user charges to the
Revenue-sharing rates and user fees	There is no revenue-sharing component to the lease Agreement between the Authority and the Operator. There are no requirements for user fees beyond stating that the Operator will provide and furnish waterway users without discrimination and those rates and charges shall apply indiscriminately to those who wish to use the facilities and service. In the agreement with the Operator, the Operator is required to submit a quarterly list of services and marketing plan to the Authority, and to meet annually to review the strategies. The Operator is required to respond to reasonable suggestions and requirements to the marketing plan.	
Sub-leasing fees and activities	The Standard Provisions state that any sublease must be approved by the Board of Public Service, the City's Board of Aldermen and the Authority. In the Authority's agreement with the operator, this was additionally stated that there would be no increase to the rent in the case that additional employment occurs. It is also understood that for any sub-leases that the Operator enters into, in addition to requiring approval by the City and Authority, there may be adjustments to the agreed rental payments, although in the current lease, there will be no change as long as additional employment is generated.	
Audits	The Operator's books and records are subject to audit by the Authority at reasonable times and upon reasonable notice. The Authority is to pay for any such audits.	
Contract Award	The Agreement between the City and the Authority requires award of sub-leases to the highest and best bid.	

		Authority in addition to the ground lease payments. In such arrangements, the Authority would receive a monthly report and have audit access to the Operator's financial ledgers. As an alternative approach, the Authority may seek to undertake Industry Outreach activities. In some cases, this takes the form of an Industry Forum laying out the Authority's general interest and intent in going forward, and allows for one-on-one meetings with interested parties to get feedback. More formal Expressions of Interest as part of a formal procurement process are another mechanism. An EOI process enables the Authority to generate ideas from bidders that can refine a procurement and development strategy. Ultimately, the Authority may award a concession based on strength of the overall business plan in terms of what the Operator is willing to invest, guarantees that may be made, and a total financial package. Some Authorities establish a Master lease that makes the Operator effectively a property manager, alleviating some resource demands on the Authority. The Authority may require a lease adjustment to any sub-leases if the rental rate is below market, or may require a share in any revenues realized by the primary Operator. The Operator is often responsible for any legal or other fees incurred by the Authority in approving or adapting the lease.

LEASE MANAGEMENT

Asset and information management is a challenge for all Authorities. There are a range of tools and software programs available to assist in asset and lease management. Many Authorities maintain a simple spreadsheet database that identifies key terms including agreement number, dates, rental rates, primary responsibilities for certain activities, and cargo-throughput or other commercial statistics.

Data management systems can grow increasingly complex, especially with the size and remit of an agency. Some Authorities have specific lease management software that helps them to electronically store and track their agreements. At the most integrated level, some Authorities are moving towards comprehensive Geospatial Information Systems that link lease data with parcel information such as Record Documents or As-built drawings, site surveys, site investigation or inspection reports, maintenance plans, and other information pertinent to a specific parcel.

In all of these tools, lease information can easily be searched and sorted by rental price, expiration, tenant, or other fields.

SUMMARY OF ANALYSIS

The existing lease structure is a relatively standard rental agreement with fixed rental rates. The Operator takes control of the parcels and operates the facility for the most part as it sees fit. The primary advantage is that it is easy to manage and provides cash flow certainty to the Authority.

The major weaknesses of the current structure and risks to the Authority (and ultimately the City) are the following:

The Authority may be agreeing to terms that under value its facility and do not incentivize the Operator to maximize the facility's potential.

The existing agreement may encourage the Operator to invest as little as possible in order to maximize profits, which undermines broader public interest towards quality infrastructure, economic development and over all growth and support of the region's businesses.

The Authority may be exposed to significant capital investment to restore facility condition because the maintenance and condition assessment requirements and enforcement mechanisms placed on the Operator are weak.

There are a number of risk mitigation and revenue maximization strategies that the Authority may consider for its upcoming lease negotiations. These include:

Minimum throughput guarantees to align the Operator's business plans with greater utilization of the facilities.

Volume-based rental payments or revenue-sharing arrangements to incentivize Operator performance.

Maintenance requirements that are less demanding of Authority resources but also promote management of the assets and a state of good repair.

End-of-lease asset assessments or hand-back requirements to protect the Authority from facing undesirable capital investment requirements or placing the Authority at a disadvantage in future lease negotiations.

DEVELOPMENT OF AN OPTIMAL LEASE STRUCTURE

The next steps toward development of an optimal lease structure require input and discussion with the Authority.

Ultimately, the lease structure will reflect the strategic goals and vision for the facility's redevelopment and future operations. Areas for further exploration and discussion in developing an optimal structure will include:

What master agreement (City and Authority) changes are required and possible?

It is understood that any changes to the procurement strategy will require input from the Authority's legal advisors. Pursuit of strategies identified above requires changes to the Standard Provisions for rental payments and other lease aspects that are a part of the agreement between the City and Authority, and which are required to be incorporated into any agreement between the Authority and an Operator.

What is the Authority's master plan and vision for the facility?

Prior to devising lease terms, the Authority must first define how it wants the new facility to operate. The updated market analysis forecasts growth in total cargo volumes, but a change in the commodity mix. For example, there is potential to capture increased volumes of grain, oilseeds, and salt. Does the Authority have a preference as to what types of cargo does it want to be handled?

There may be trade-offs in the types of cargo based on environmental concerns or spatial constraints. Grain and oilseeds have not historically been handled at the terminal and unique storage requirements or transportation infrastructure must be tied into any lease terms. The Authority might consider preferred cargo types in evaluating the business plans and proposals from interesting Operators.

The master plan will also identify infrastructure requirements to allow for safe and efficient handling at the facility. Once these requirements and associated costs are understood, the Authority can consider how to allocate responsibilities for needed investment as well as outline performance targets and operating requirements.

What is the industry's view on feasibility and terms?

The Authority may want to consider industry outreach activities during the procurement planning stage. This might include an Industry Forum, meetings with interested Operators, or a formal Request for Information/Expression of Interest. Potential operators may have ideas and suggestions on the strategic plan in terms of the types of users and cargo they might seek out, ideas on operating conditions and their willingness to invest and develop the facility.