



Freight Study for Bloomington-Normal, IL Metropolitan and McLean County Region

Summary Report

Prepared for:

McLean County Regional Planning Commission

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Freight Study for Bloomington-Normal, IL Metropolitan and McLean County Region

The objective of the Regional Freight Study for Bloomington-Normal, IL Metropolitan and McLean County Region (Regional Freight Study) was to provide resources so that the McLean County Regional Planning Commission (MCRPC) could better understand the multimodal freight system in the county and use that information to inform policy and programming decisions in the region.

Summary Report

This report summarizes the work conducted over the 2017 study period that is documented in a series of three separate technical Working Papers.

- Working Paper 1 – Freight System Inventory and Assessment
- Working Paper 2 – Project Prioritization Policy
- Working Paper 3 – Recommendations

A fourth report on the next steps MCRPC should take to incorporate freight in their regional travel demand model was also developed.

Acknowledgments

The CPCS Team acknowledges and is thankful for the input of those consulted in the development of this Regional Freight Study, as well as the guidance and input of representatives from MCRPC.

Opinions

Unless otherwise indicated, the opinions herein are those of the authors and do not necessarily reflect the views of MCRPC.

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1 Freight System Vision, Goals and Guiding Principles

Key Takeaway

Utilizing the already established 2017 Long Range Transportation Plan (LRTP) Vision, Freight Goals have been identified to link to the Vision and to bring clarity to what is most important to McLean County's freight system. In order to track progress toward reaching goals, each goal will have at least one performance measure linked to it. These goals and performance measures will empower the McLean County Regional Planning Commission (MCRPC) to make decisions/take action based on data.

1.1 McLean County Freight System Goals

The McLean County Regional Planning Commission (MCRPC) has been designated by Illinois DOT as the metropolitan planning organization (MPO) for the Bloomington-Normal metropolitan area. MCRPC's major role relates to the coordination of long range transportation system planning, forming regional transportation policy, and making programming decisions to best apply Federal transportation dollars to regional needs. During development of the recent 2017 Long Range Transportation Plan (LRTP) a Vision was established to provide a foundation to this key coordination role.

2017 LRTP Vision: Our transportation system increases options for mobility and provides equitable access in support of a safe, healthy, livable, sustainable and vibrant region.

Through state and Federal guidance, MCRPC is encouraged to engage public and private sector freight stakeholders in the transportation planning process. To aid MCRPC in finding an approach to including freight in this process, and in line with this 2017 LRTP Vision, freight system-specific goals have been recommended. These goals have been used to conduct a general assessment of the Region's freight system needs as part of this Freight Study, and were validated during stakeholder consultations. It is intended that MCRPC will carry these goals forward into their daily activities and ongoing evaluation of the freight system.

Freight System Goals:

Freight system preservation,
Freight system connections and options, and
Freight system mobility.

Each of these goals is further described below for clarity.

1.1.1 Freight System Preservation

Preserving McLean County's roadways was a primary goal of the Freight Study. Freight stakeholders identified the need for increased system preservation, citing the deteriorating condition of roadways and infrastructure design as primary concerns. Stakeholders noted the poor condition of roadways contributed to higher maintenance costs. Infrastructure design includes roadway geometries and the ability of roadways to handle fully loaded trucks.

The Freight System Preservation goal is focused on identifying specific locations that are in need of maintenance and are critical to the movement of freight. This could include prioritizing corridors that are most heavily used by the County's key industries and working toward improving them.

1.1.2 Freight System Connections and Options

McLean County relies on internal and external connections for the movement of goods to, from and within the County. For example, grain elevators serve as consolidation points for agricultural activity. Similarly, connections outside of the county such as water ports or intermodal facilities provide access to externally produced goods, as well as access to markets outside the County. The goal of Freight System Connections and Options focuses on providing the first- and last-mile infrastructure connections to key facilities that provide access to the goods, markets, and modes required by McLean County businesses. This could also include the exploration of future freight-oriented development within the County (e.g., airport, or repurposed Mitsubishi site).

1.1.3 Freight System Mobility

In line with the focus of Federal and Illinois DOT performance measures, mobility is a critical goal for transportation infrastructure. Mobility enables cost-effective transportation services and allows businesses to optimize operations, for example, inventory management techniques such as just-in-time manufacturing. Stakeholder outreach did not indicate significant congestion or concern over bottlenecks, suggesting the focus of this goal should be on ensuring that the County maintains a similar level of performance in the future (compared to today) as the County changes and is affected by emerging trends.

1.2 Guiding Principles

Acknowledging the Vision and goals developed for MCRPC’s LRTP, the goals established for the Region’s freight system, as well as alignment with both state and Federal freight-related activities, “Guiding Principles” have been established. These Guiding Principles should be considered and integrated, as possible, into all plan, policy and other strategic actions related to the freight system. The Guiding Principles include:

- **Keep/maintain what we have.** This principle is in sync with the MCRPC LRTP and is intended to place investments on the existing system, rather than extending and building new. In part, this principle may provide a benefit of reducing development sprawl.
- **Make strategic investments.** This principle is partially linked to the MCRPC LRTP and is intended to ensure the best use of limited funds. This also relates to the Illinois DOT goal to expand infrastructure strategically.
- **Embrace technology.** This principle is linked to Federal guidance that encourages the application of technology towards transportation system challenges. This is also considered in the MCRPC LRTP. As private sector enterprises continue to find innovative ways to collect and distribute data, information, and applications to better manage the system, MCRPC should consider how to harness these to the Region's benefit – and to advance lower cost transportation solutions.
- **Respect context.** This principle relates to respecting the context within which freight planning, construction, operations and maintenance and funding decisions are made and the role each of the various freight stakeholders have in the process and in the transportation system. Respecting context in McLean County also means that a “one-size-fits-all” approach will not work due to the rural and urban nature of the system.
- **Forge partnerships.** This principle is linked to the MCRPC LRTP as one of the 5 E's – Education. MCRPC plans direct engagement to advocate for the multimodal transportation system, to identify need and craft solutions. As part of ensuring freight interests are being represented in this process, MCRPC should forge partnerships with public and private sector freight system stakeholders.
- **Coordinate fund and finance priorities.** This principle is acknowledged in the MCRPC LRTP, specifically that public agencies will need to develop cooperative strategies to advocate for funding and to jointly fund projects. Related to freight projects, this cooperation should include direct financial participation by the private sector when projects benefits are mutually beneficial.
- **Consider system sustainability.** This principle is included to ensure that any actions MCRPC takes consider not just the “today” but the ability of the agency and partners to sustain the action into the future. As example, this may apply to projects advanced, keeping in mind not just the upfront cost, but also the long term operations and maintenance costs. This may also apply to planning processes MCRPC considers in the future, such as actions identified in this Regional Freight Study. Whatever actions are initiated, there must be a plan for follow-through.

2 Regional Freight System Assets and Inventory

Key Takeaway

McLean County is in a central location, within a one-day truck drive of 78 million people, or about a quarter of the US population. The County lies at the intersection of important regional and national truck and rail freight corridors connecting the region to major metropolitan areas in all directions, including I-39, I-55, and I-74, connecting the County to the north, south, east and west.

These roadways provide access to major intermodal facilities in Chicago, Rochelle, and Decatur. Five railroads provide the County with access to major classification facilities in Chicago and St. Louis. And both road and rail connections provide connectivity to ports along the inland waterway – a critical freight mode for the major corn and soybean crops that are produced in the Region. The County also has an airport that can land 767's and with a new FedEx regional cargo hub.

The County may be challenged growing freight-related industries in the future, as today only about one-third of the workforce is in freight-related industries. Manufacturing employs about 6,000 people, or 6.5% of the County's workforce, after the loss of the Mitsubishi plant. Important manufacturers that remain include printing, transportation equipment, and food manufacturing. Agriculture is the County's other top freight-related industry and in terms of land touches every corner. While employment in agriculture is low the industry generates large amounts of freight. Additionally, the high output of agriculture in the County creates additional employment in other industries, such as food manufacturing.

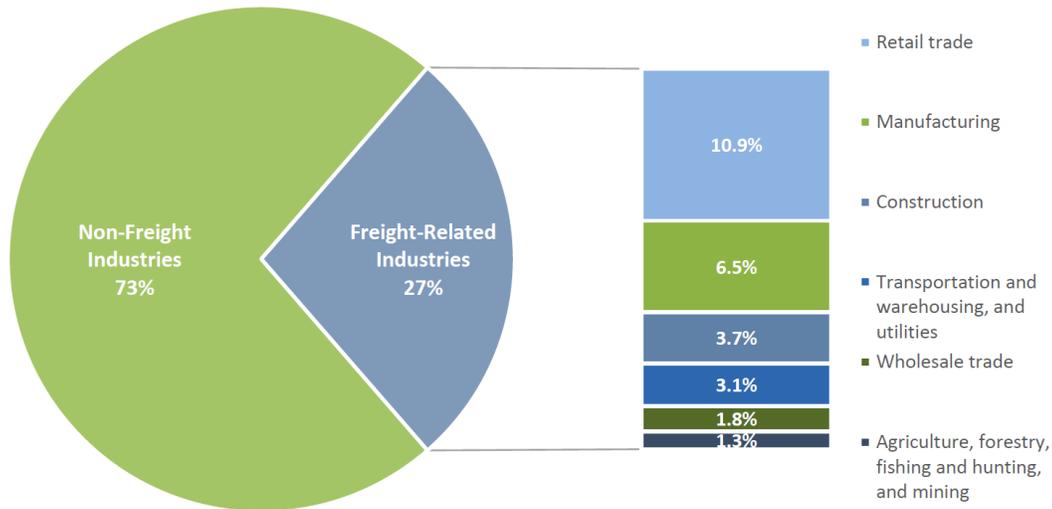
2.1 Freight-Related Industries in McLean County

Just over one-quarter of McLean County's workers are employed in freight-related industries, industries that rely heavily on the movement of physical goods to support their operations. For example, the County's farms are freight-related because they would not be viable businesses if they could not ship their grain to elevators, and manufacturing companies are freight related because they could not operate without shipments of raw materials, and a way to transport finished goods. Other freight-related industries include construction, wholesale trade, retail trade, and transportation.

While McLean County is known for its educational and financial service institutions, the County is well-positioned to support freight-related industries. McLean County's location within a one-day drive of 78 million consumers, and major rail and interstate connections could make it an attractive site for freight-

related industries, as they could serve a large market surrounding the County.¹ However, freight-related industries as a whole comprise a relatively small share of the County’s employment, especially in relation to the rest of the US. Figure 2-1 shows the proportion of McLean County’s employment made up by freight-related jobs.

Figure 2-1: Workforce Composition



Source: CPCS Analysis of American Community Survey, US Census Bureau. 2015.

These freight-related industries as a whole employ about 24,700 people, or 27.3% of the county’s workforce. Retail trade comprises the largest portion of freight-related jobs, with 10.9% of the workforce, and the next-largest freight-related industry is manufacturing, which employed almost 6,000 people, 6.5% of the County’s workforce. Figure 2-2 provides specific employment details for each freight-related industry.

Figure 2-2: Freight-Related Industry Employment

Industry	Number Employed	Percent Employed
Retail trade	9,880	10.9%
Manufacturing	5,936	6.5%
Construction	3,326	3.7%
Transportation and warehousing, and utilities	2,796	3.1%
Wholesale trade	1,623	1.8%
Agriculture, forestry, fishing and hunting, and mining	1,158	1.3%
Total	24,719	27.3%

Source: CPCS Analysis of American Community Survey, US Census Bureau. 2015.

2.2 McLean County Multimodal Freight System Infrastructure

McLean County is served by an extensive road and rail network, which includes three interstates, and five railroads. Firms that need time-sensitive transportation have access to cargo services at Central Illinois Regional Airport in Bloomington, notably via the FedEx facility established there in 2015. Firms that ship large amounts of bulk materials also have relatively close access to Illinois River barge terminals

¹ “Building the BN Advantage.” 2015.

in neighboring Peoria and Tazewell Counties. McLean County’s freight system, and its proximity to the Illinois River, is shown in Figure 2-3.

Figure 2-3: McLean County Multimodal Freight System



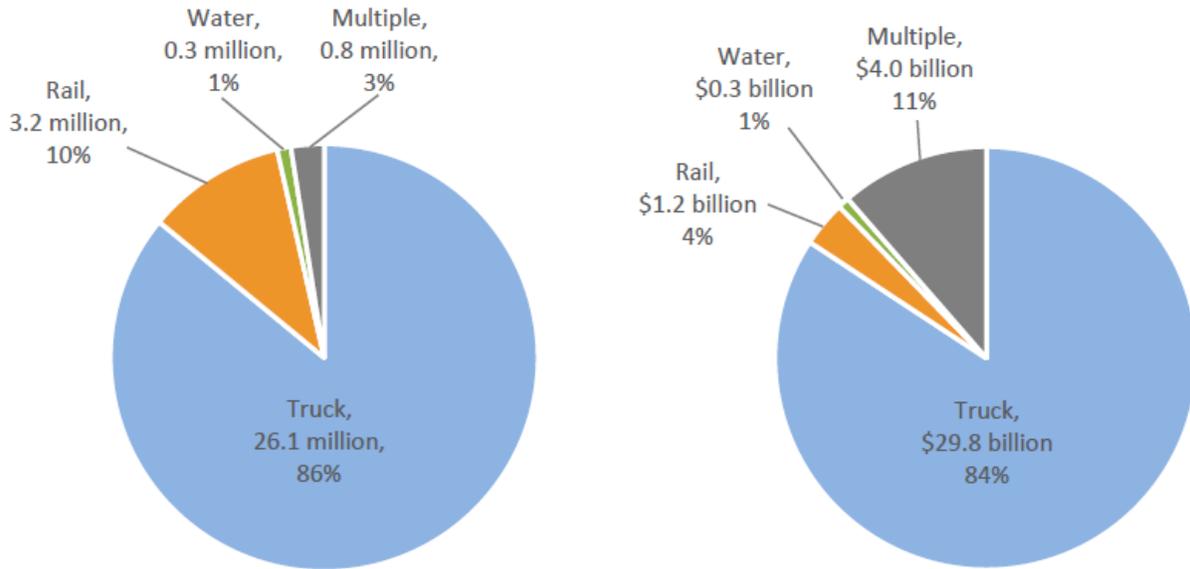
Source: National Transportation Atlas Database. Bureau of Transportation Statistics. 2015.

In 2014, McLean County’s freight network carried over 30 million tons of goods, which were valued at almost \$35.4 billion dollars. Truck shipments comprised the majority of the County’s freight by both tonnage (26.1 million tons, 86%), and value (\$29.8 billion, 84%). Compared to the share of freight carried by trucks in the State of Illinois (63%)², this shows significant reliance on the highway system for goods movement in the County. This high truck share reflects McLean County’s role as a crossroads with direct interstate highway connections to major cities such as Chicago, Indianapolis, and St. Louis.

The second largest mode by tonnage is rail, which carries 3.2 million tons (10%), with a value of \$1.2 billion. The second largest mode by value is “multiple”, which includes intermodal containers, which accounted for \$4 billion (11%) of the County’s freight movements. Figure 2-4 provides a full comparison how much value and tonnage is carried by each mode.

² 2017 State Transportation Plan, Freight Fact Sheet, Illinois Department of Transportation, April 2016

Figure 2-4: Freight System Tonnage (left) and Value (right) by Mode (2014)



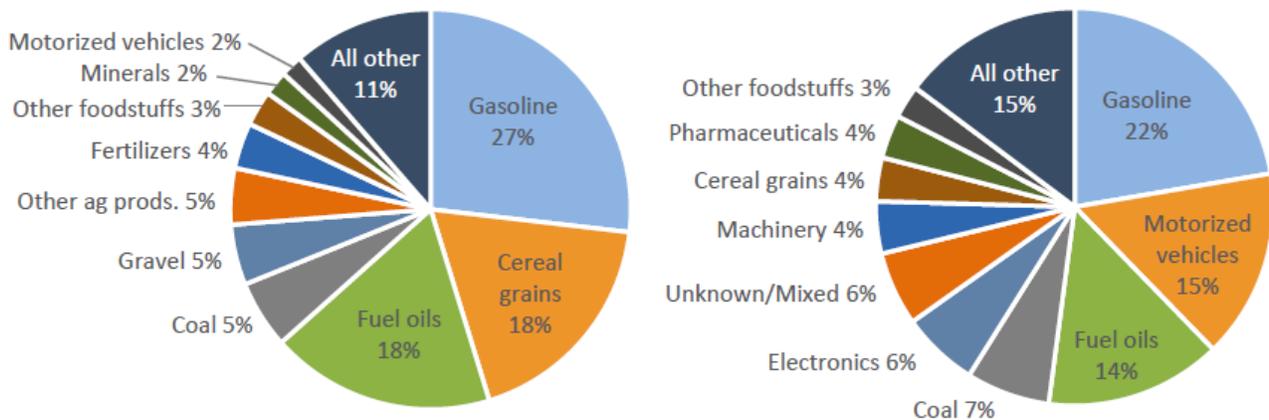
Source: WSP | PB Analysis of FHWA Freight Analysis Framework version 4 (FAF4) data. Preliminary.

While McLean County is landlocked, some shipments may be marked as “water” due to the proximity of the County to the Illinois River and the challenges related to precisely disaggregating data from the State- to County-level. It is assumed that any traffic noted on the waterway would have been transported to the water via truck.

Air cargo is not included in this analysis likely because the data is from 2014, and air freight service did not begin until 2015. Oftentimes air freight that is carried as belly cargo in passenger planes is captured in the multiple mode category. Recent air cargo tonnage is provided in Section 2.2.3.

Figure 2-5 shows the tonnage and value of major commodities on the County's freight network. In terms of tonnage, the top three commodities are gasoline, cereal grains, and crude oil. The top three commodities by value are gasoline, motorized vehicles, and fuel oils.

Figure 2-5: Freight System Tonnage (left) and Value (right) by Commodity (2014)



Source: WSP | PB Analysis of FHWA Freight Analysis Framework version 4 (FAF4) data. Preliminary.

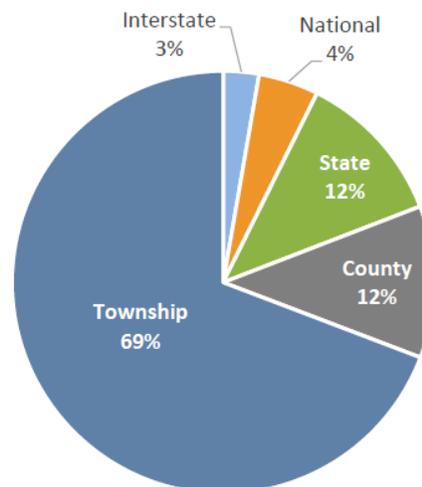
2.2.1 Highway System

There are about 2,900 miles of road in McLean County, and about 75% of these roads are considered rural. As a whole, this road network carries 26.1 million tons of goods (86% of total tonnage), worth \$29.8 billion (84% of total value) each year. Figure 2-3 provides a high-level view of the County’s road network. McLean County is at the crossroads of 3 major interstates that connect the County to Rockford and Wisconsin to the north; Chicago to the northeast; Indianapolis to the east; Springfield to the south; St. Louis to the southwest; and Peoria to the northwest.

About 77% of the County’s roads are maintained by townships. County Highways comprise the second largest mileage, about 13% of the network. State, national, and interstate highways make up the remaining 9% of the network. 73% of the County’s roads are paved. Figure 2-6 provides a breakdown of mileages by system type, as well as information about rural and urban mileage.

Figure 2-6: McLean County Road Mileage by System Type

	Interstate	National	State	County	Township
Urban	16.22	16.22	83.39	332.74	1,529.51
Rural	69.23	127.99	286.03	31.21	636.44
Total	85.45	144.21	369.42	363.95	2,165.95
% Paved	100%	100%	98.5%	72.2%	65.7%



Source: 2015 Illinois Highway and Street Mileage Statistics. Illinois Department of Transportation. 2015; National Highway Planning Network. Federal Highway Administration. 2016.

Key highway corridors in the Region that provide access to major intermodal facilities in Chicago, Rochelle, and Decatur, include:

- I-39 – a “logistics corridor” that connects the County to Rockford and Wisconsin to the north;
- I-55 – that connects the County to Chicago to the northeast, and St. Louis to the southwest; and
- I-74 – that connects the County to Indianapolis to the east, and Peoria to the northwest.

Truck shipments comprised the majority of the County’s freight by both tonnage (21.6 million tons, 72%), and value (\$29.8 billion, 84%). The majority of the tonnage and value carried by trucks was inbound to McLean County, while relatively smaller values and tonnages were outbound from the County, or internal movements (entirely within the County). Fuels such as gasoline, oil, and coal, and grain stand out as key commodities by weight. These three fuels also make up 50% of the County’s truck shipments

by value. This high tonnage and value of fuel may be due to the presence of a petroleum distribution hub near Heyworth. Key truck freight trading partners for the County are other communities in Illinois, followed by other Midwestern states that border Illinois.

2.2.2 Railroad System

Five railroads operate a total of 132 miles of mainline railroad track in McLean County, providing connections in all directions. The Union Pacific (UP) Railroad runs north-south through the center of the County and provides a link to Joliet and St. Louis, as well as many locations west of the Mississippi River. The Norfolk Southern (NS) Railway runs east-west through the center of the County and provides a link to Peoria and connections to points east of the Mississippi River. The Toledo, Peoria, and Western (TPW) Railway parallels the route of US-24 and provides links to Peoria and Indiana. The Canadian National (CN) Railway cuts through the southeastern corner of McLean County and passes through the community of Bellflower. CN also has a short branch line serving Heyworth. The Bloomer Shippers Connecting Railroad (BLOL) is a Class III short line serving the communities of Anchor, Colfax, and Cropsey, and has connections with NS and CN. Figure 2-7 provides information on the mileage and number of tracks operated by each railroad, as well as traffic volumes.

Figure 2-7: McLean County Road Mileage by System Type

Railroad	System Miles (Owned)	Trackage Rights (Miles)	Trains per Day	Number of Mainline Tracks	Grade Crossings
Norfolk Southern	45	0	5	1	83
Union Pacific	44	0	17	1	41
Canadian National	13	0	4	1	20
Toledo, Peoria, and Western	21	0	1-3	1	35
Bloomer Shippers Connecting	9	0	<1	1	22
Kansas City Southern	0	42 on UP	N/A	N/A	N/A

Sources: Public Crossing Inventory Detail Report. Federal Railroad Administration. 2017; National Transportation Atlas Database. Bureau of Transportation Statistics. 2015.

McLean County has 150 publicly-owned railroad grade crossings. In addition, the County has 50 private crossings. Recently, several crossings on the UP line that is shared with the Chicago-St. Louis high-speed rail service were upgraded to include four-quad and pedestrian gates.

McLean County has two switching yards and two interchanges where freight cars can be moved between different railroads. Since McLean County is a major agricultural producer, it is also home to 14 rail-served grain elevators. These elevators are the County’s most common intermodal points, as they facilitate the transfer of corn and soybeans from trucks to trains.

In 2014, McLean County’s railroads carried 3.2 million tons of goods (10% of total tonnage) worth \$1.2 billion (4% of total value). This lower value to tonnage ratio reflects the fact that rail is used to carry heavy, bulky goods that are lower in value, such as agricultural products or minerals.

Cereal grains such as corn are the top commodity by tonnage, they comprised 29% (926,500 tons) of rail shipments in 2014. Fertilizers are the second highest tonnage commodity, making up 23% of the County’s rail tonnage (744,800 tons). In terms of value, gasoline is the top rail commodity (\$236 million, 19% of total), followed by cereal grains (\$233 million, 19% of total). Unlike highway shipments, most top destinations for rail shipments were outside of the Midwest. While Illinois remained the top trading partner, Tennessee, Georgia, South Carolina, and Montana emerged as other top partners.

Illinois High-Speed Intercity Passenger Rail

The Illinois DOT is currently advancing a high-speed intercity rail (HSR) project, connecting Chicago to St. Louis via a 284-mile corridor. This service is being designed to be a competitor to both passenger car and air travel, with train speeds up to 110 mph.

The importance of this project to freight is due to the fact that the HSR will share a corridor and run on track that is also used by freight railroads. The system will traverse CN tracks between Joliet and Chicago (37 miles), UP tracks between Joliet and Godfrey (215 miles), UP and Kansas City Southern tracks between Godfrey and East St. Louis (29 miles), and Terminal Railroad Association tracks between East St. Louis and St. Louis, MO, which includes crossing over the Mississippi River Bridge and into the St. Louis Terminal.

The service passes through McLean County on UP trackage. This corridor is predominantly single track (182 miles), but numerous sidings have been added to minimize conflict between freight and passenger services. One such siding essentially double tracks the line through Normal where an upgraded station is located. Additionally, four-quad and pedestrian gates have been added to protect all crossings in Uptown Normal.

In July 2012, Uptown Station was opened to serve as multimodal transportation center for Amtrak rail, motor coach passengers, and local transit buses. The station is part of a new urban center of a community that is among the top 50 Amtrak locations nationwide by ridership.

2.2.3 Aviation System

McLean County is home to the Central Illinois Regional Airport (CIRA), which provides both passenger and freight service. The airport’s two runways are 6,500, and 8,000 feet in length, which means the airport can support larger jet operations.³ For example, the 8,000-foot runway is long enough to support takeoff of a fully-loaded Boeing 767.⁴ This length and its capacity for large aircraft make the airport capable of handling air freight movements.

Between January and November 2016, the airport shipped 3,038 tons and received 4,019 tons of air freight. December 2016 tonnages were not available from the Bureau of Transportation Statistics. Figure 2-8 shows how much cargo went to CIRA’s top partner airports of Memphis, TN, and Madison, WI.

Figure 2-8: Air Freight Tonnages at CIRA, January – November 2016

City	Departed from CIRA		Arrived at CIRA	
	Tons	Percent	Tons	Percent
Memphis, TN	2,545	83%	3,658	91%
Madison, WI	394	13%	322	8%
All Others	99	4%	39	1%
Total	3,038	100%	4,019	100%

Source: T-100 Domestic Market (All Carriers). Bureau of Transportation Statistics. 2016

The high traffic with Memphis and Madison can be attributed to FedEx Express, which carries 99.9% of CIRA’s cargo tonnage, and maintains a “world hub” sorting facility in Memphis, and a smaller regional

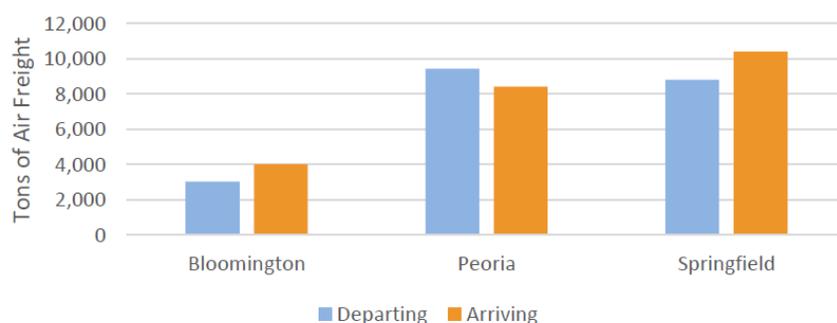
³ “CENTRAL IL ARPT AT BLOOMINGTON-NORMAL.” Airport Master Records and Reports. 2016. <http://www.gcr1.com/5010web/airport.cfm?Site=BMI&AptSecNum=3&SpecRWYid=2099249>

⁴ “767 Airplane Characteristics for Airport Planning.” Boeing. 2011.

air cargo facility in Madison. Prior to 2015, FedEx used Peoria's airport as an air cargo facility but relocated to McLean County because of the county's greater number of interstate highway connections.⁵

CIRA carries a smaller amount of cargo relative to other airports in Central Illinois. Both Peoria and Springfield carry more than twice as much cargo, primarily from either FedEx or UPS. Major Illinois air freight terminals like Rockford carry more than 15 times as much cargo as CIRA. While CIRA's tonnages are lower, the airport has the capacity to grow and has transportation assets like highway connections that may be attractive to other air shippers. The relocation of FedEx demonstrates the potential value of McLean County's location for air freight firms.

Figure 2-9: Air Cargo Tonnages at Central Illinois Airports. January-November 2016.



Source: T-100 Domestic Market (All Carriers). Bureau of Transportation Statistics. 2016

2.2.4 Pipeline System

McLean County is served by two types of pipeline systems: natural gas pipelines, and hazardous liquid pipelines, which handle materials like crude oil, or gasoline. There are 124.13 miles of hazardous liquid pipelines in service in McLean County, and hundreds of miles of natural gas lines. Figure 2-10 provides a list of the hazardous liquid pipelines in the County. Natural gas pipelines are not listed.

Figure 2-10: McLean County's Active Hazardous Liquid Pipelines

Name	Operator	Length (miles)	Status
Flanagan South	Enbridge	36.67	In Service
Magellan	Magellan Midstream Partners	38.99	In Service
W0160EH	Buckeye Partners	20.67	In Service
Wood River to Hammond	Explorer Pipeline Co	21.07	In Service
P2400 CHICAP	BP Pipeline	6.73	In Service

Source: National Pipeline Mapping System. US Department of Transportation. 2017.

In terms of pipeline facilities, the County has one pipeline terminal near Heyworth, which is operated by Magellan Pipeline. The County also has four underground natural gas storage areas, located east of Bloomington and Normal.⁶

⁵ "FedEx move to Bloomington airport 'was more about trucking than aviation.'" Peoria Journal Star. May 12, 2014.

⁶ Illinois State Profile and Energy Estimates. Energy Information Administration. 2017.

2.3 Midwest, National, and International Connectivity

From a population reach perspective, McLean County is in a central location, within a one-day truck drive of 78 million people, or about a quarter of the US population.⁷ Figure 2-11 provides a reference for travel times and mileages to some of the closest nearby cities and illustrates McLean County's close proximity to major population centers.

As described in previous sections, the County has good highway connectivity, but the challenge is that many businesses have roadways as their only transportation option, and in cases where other modes are used, trucks must facilitate the first- and last-mile of these movements (which in many cases is actually a distance of 40 miles, or more).

Figure 2-11: McLean County's Distance to Regional Cities

Regional City	Approximate Distance	Approximate Drive Time
Chicago	130 Miles	2 Hours
Indianapolis	175 Miles	2.5 Hours
St. Louis	160 Miles	2.5 Hours
Peoria	40 Miles	40 Minutes
Champaign	50 Miles	50 Minutes
Springfield	70 Miles	1 Hour
Decatur	45 Miles	1 Hour

Source: Google Maps. 2017.

2.3.1 Waterway Facilities

McLean County does not have any waterway ports, but the agriculture-driven economy of much of the County depends on the inland waterway system to cost-effectively transport bulk grain to international export markets. There are numerous ports along the Illinois River adjacent to McLean County, many of which handle grain, as shown in Figure 2-12. Key roadway corridors of US-24, US-150, and US-136 provide critical east-west connectivity to facilities on the Illinois River where grain can be transloaded from truck to barge.

Also critical to the movement of barged grain is the inland waterway systems' lock and dam infrastructure. There are several locks that barges must traverse on route to Gulf ports for international export – Peoria Lock and Dam (Illinois River), LaGrange Lock and Dam (Illinois River), Melvin Price Lock and Dam (Mississippi River), and Lock and Dam 27 – Chain of Rocks (Mississippi River). The locks on the Illinois River were constructed in the 1930's and the maintenance needs of this aging infrastructure have surpassed annual operations and maintenance funding. While the connectivity of the inland waterway system is critical, the deteriorating infrastructure is a concern of local shippers.

⁷ "Building the BN Advantage." 2015.

Figure 2-12: Illinois River Ports Adjacent to McLean County

Name	Location	City	County
ADM/GROWMARK, Havana North Terminal Grain Dock	Mile 119.7, left bank, Illinois River	Havana	Mason
CF INDUSTRIES, KINGSTON MINES TERMINAL DOCK	Mile 145.4, right bank, Illinois River	Kingston Mines	Peoria
CF Industries, Peoria Warehouse No. 1 Dock	Mile 146.7, right bank, Illinois River	Mapleton	Peoria
AMERICAN MILLING CO., PEKIN GRAIN ELEVATOR DOCK	Mile 151.2, left bank, Illinois River	Pekin	Tazewell
SEMMATERIALS, PEKIN ASPHALT PLANT DOCK	Mile 152.7, right bank, Illinois River	Pekin	Peoria
CARGILL CROP NUTRITION, PEKIN TERMINAL DOCK	Mile 154.0, right bank, Illinois River	Bartonville	Peoria
SHELL OIL PRODUCTS - U.S., BARTONVILLE, TERMINAL DOCK	Mile 155.0, right bank, Illinois River	Bartonville	Peoria
TERRA INDUSTRIES, NORTH PEKIN TERMINAL DOCK	Mile 157.3, left bank, Illinois River	Pekin	Tazewell
CENTRAL ILLINOIS FREIGHT HANDLING CORP. DOCK	Mile 158.4, left bank, Illinois River	Creve Coeur	Tazewell
PEORIA BARGE TERMINAL WHARF	Mile 160.4, right bank, Illinois River	Peoria	Peoria
ADM/GROWMARK RIVER SYSTEM, PEORIA TERMINAL WHARF	Mile 161.4, right bank, Illinois River	Peoria	Peoria
PEORIA CITY DOCK	Mile 163.6, right bank, Illinois River	Peoria	Peoria
POWLEY SAND AND GRAVEL CO DOCK	Mile 172.5, left bank, Upper Peoria Lake	Spring Bay	Woodford
GALENA ROAD GRAVEL, CHILLICOTHE DOCK	Mile 181.0, right bank, Illinois River	Chillicothe	Peoria

Source: National Transportation Atlas Database. Bureau of Transportation Statistics. 2015. Note, the NTAD database only provides a listing of port facilities, as such the ADM/Growmark dock was added to list to acknowledge grain elevator presence in Havana, IL.

2.3.2 Intermodal Rail Facilities

A situation similar to waterway access is present to connect to rail services that provide distribution to the Midwest, National, and International markets. McLean County firms looking to ship their goods in containers have to send their goods to nearby intermodal container transfer facilities. Figure 2-13 shows mileage and travel time to nearby cities with these intermodal facilities.

Figure 2-13: Travel Time (Hours) and Mileage to Nearby Rail Intermodal Facilities from Bloomington

City	Name	Rail Service	Drive Time	Miles
Decatur	ADM Intermodal	CN, CSX, NS	1 hour	50
Joliet	CenterPoint Logistics Park	BNSF	1.5 hours	90
Joliet	Global IV	UP	1.5 hours	90
Joliet	Joliet Intermodal Terminal	CN	1.5 hours	90
Rochelle	Global III	UP	1.75 hours	110

Source: Google Maps. 2017.

Decatur was selected because it is the closest intermodal terminal. Joliet was selected because it is the second-closest city with intermodal service, and is home to three intermodal terminals. Rochelle was selected because it is located along the I-39 logistics corridor.

Midwest Inland Port – Decatur, IL

The Midwest Inland Port (MIP)⁸ is a multimodal transportation hub located in Decatur, IL, one hour south of Bloomington-Normal. This facility, developed over the past year, is the result of a partnership between Decatur, IL and Macon County economic developers and several private sector partners to provide a full suite of domestic and international shipping services to local companies.

The MIP is located at the intersection of major roadways – Interstates 72, 55, 74, 57 and US Highway 51 – and Class I railroads. The centerpiece of this facility is an intermodal ramp owned by ADM and served by 3 Class I railroads – CN, CSX & NS – with a short line connection. The Decatur Airport is part of the MIP, equipped with a US Customs Office and an 8,400' long runway that can handle large aircraft. Area Third Party Logistics Providers (3PLs) offer freight forwarding, transloading, warehousing, stock management, and temperature-controlled storage to MIP users. The facility enables area shippers to reduce their transportation/supply chain costs.

The MIP may also spur development in Macon County. As example, OmniTRAX is interested in attracting mixed-use light industrial businesses along their rail line, which runs along IL-48 before interchanging with CN just north of Decatur.

Stakeholders in McLean County noted that the MIP should also be viewed as an opportunity for the County, due to the MIP's proximity and unique ability to containerize grain for export. At present that stakeholders' perspective was that McLean County businesses continue to be oriented to Chicago, instead of this nearby facility to the south.

⁸ Sources: Midwest Inland Port, www.midwestinlandport.com; "CN, ADM, and Midwest Inland Port grow intermodal in Decatur, Ill.," *RailwayAge*, August 24, 2016

3 Regional Freight System Needs and Issues

Key Takeaway

The transportation system in McLean County works well to meet freight transportation and business needs, according to stakeholders. There are currently no major bottlenecks in the region associated with infrastructure quality or congestion. That being said, the need to maintain roadways, ensure business have access to multiple modes, and advance select improvements to support the local agricultural industry were consistently identified during consultations. Some of the needs and issues identified by stakeholders go beyond the jurisdiction of any regional planning organization and emphasize the importance of solving regional freight issues with public and private sector partners.

The three most pressing needs noted by multiple stakeholders were related to the highway system and included:

1. Need to maintain key corridors at 80,000 lb. weights, or above.
2. Need to minimize seasonal weight restrictions for trucks.
3. Need to make targeted highway infrastructure investments in system preservation and maintenance (no large scale or major new highway projects were identified)

Each of these needs are directly related to agricultural truck movements. Understanding where and what routes are most important to this industry can enable public agencies to conduct more frequent proactive maintenance to ease the flow of goods.

Stakeholder Consultations were carried out during April and May 2017 to complement data analysis and ensure all freight system needs and issues were identified. Stakeholders consulted included shippers, manufacturers, industry associations, transportation service providers, and public agencies.

3.1 Highway System Needs and Issues

3.1.1 Highway System Preservation and Maintenance

The single most important issue mentioned in virtually all consultations was the need to focus on transportation system preservation and maintenance, particularly roadways. Roads need to be properly maintained to ensure that shippers can receive their products on time and with low risk of damage in transit, and so that carriers can avoid higher vehicle operating associated with vehicle maintenance from pot holes, tires wearing out, etc.

It is also important to make selected new/expanded infrastructure investments. Of note, a number of manufacturing and agricultural facilities described a need for road maintenance outside of their facilities, and nearby roads connecting them to Interstate roads, where there is wear and tear from a concentration of trucks coming in/out of their facilities.

Pavement Type and Roadway Design

Pavement and/or geometric design issues were mentioned related to both urban and rural roadways in McLean County. Most of the roads under County jurisdiction are on the urban fringe, and in the rural parts of the regions. The County maintains approximately 366 miles of roadway which are constructed of a combination of hot mix asphalt (HMA) (200 miles) and oil chip (160 miles). Thirty townships have jurisdiction over the remaining approximately 1,400 rural miles in the County. Due to the nature of pavement type, the maximum weight load year round is 80,000 lbs. (this is further discussed below), and some roads are posted at 72,000 lbs. (these are predominantly oil chip roads that do not have the base to hold more weight).

Stakeholders noted that township road systems are not designed for today's trucks. Trucks are larger, have trouble negotiating turns, and sometimes slip into ditches, causing damage and roads to deteriorate. While concrete or heavy-duty HMA pavements are not needed on all township roads, any reasonable measures that might be undertaken to improve these district roads would aid the economies of the rural community.

In urban areas geometric issues were more commonly noted in terms of roadway design issues. Similar to rural roads, urban roadways are not designed for large semi tractor-trailer combinations. While this was noted as an issue, stakeholders noted it is not a bottleneck to freight movement, as slower speeds in urban areas allow trucks to navigate the system with caution.

3.1.2 Targeted Infrastructure Investment

In consultation with public and private sector stakeholders most noted that large new infrastructure investments are not needed. However, targeted infrastructure investments should be made to ensure the existing system is best preserved. In 2015 McLean County in partnership with the Illinois Soybean Association conducted an analysis of roadway infrastructure critical to the agricultural industry and prioritized investment needs.⁹ The roadway system needs identified and the specific projects recommended in that Report are similar to those recommended by stakeholders during Freight Study consultations. These are further described in Chapter 4. In all, twenty projects were recommended that fall into one of three categories: resurfacing project, reconstruction project, or bridge project.

3.1.3 Weight Limits

Seasonal Weight Restrictions

Freight movement in the agriculture sector is highly seasonal, with peak traffic in the spring and fall. Illinois allows spring weight limits to be posted for up to 90 days. Typically the window for posting is between January 15 and April 15 (when conditions thaw). During this period many oil chip roads are posted at 8-ton and HMA roads at 10-ton limits. This means that it is more difficult to get product in/out

⁹ Roadway Infrastructure Prioritization Report: McLean County, IL, Prepared by Hansen for McLean County and the Illinois Soybean Association, July 2015

of farm with these restrictions. The County tries to respect and understand industry needs and only posts limits when absolutely necessary, in an attempt to minimize time of the season limitation.

Year Round Weight Limits

Weight limitations on roads and bridges were another major factor mentioned by stakeholders, particularly in the agricultural sector (as well as for an area ready-mix cement plant). National weight standards apply to commercial vehicle operations on the Interstate Highway System. These Class I truck routes allow up to 80,000 lbs. without requiring a permit. Off the Interstate Highway System, states may set their own commercial vehicle weight standards. Illinois has set a standard limit of 80,000 lbs. for Class II and Class III truck routes. Class II and Class III routes include select US, State Routes, and local routes, such as County Highways. Truck routes are designated by ILDOT or local officials having jurisdiction over the route.

In practice, stakeholders have noted that many roads and bridges are not built for 80,000 lbs. Ensuring weight limits of at least 80,000 lbs. on key corridors used by the farming sector is particularly relevant as the agriculture sector in the area is changing. One stakeholder noted that Danvers-Yuton Road cannot handle 80,000 lbs. creating a bottleneck for farmers in western McLean County that need to access the grain elevator in Yuton. Trucks must lighten their load to use Danvers-Yuton Road, or take a circuitous route road such as IL-9 to US-150 to the elevator.

Insofar as municipal/urban roads are concerned, one stakeholder noted that some urban roads should be upgraded to handle 80,000 lbs. trucks to enable select bulk businesses to reach the highway system with heavier trucks. The stakeholder noted that the weight limit on some downtown roads in the region are 72,000 – 73,000 lbs., depending on axle loading (the location of these routes have not been confirmed).

Weight Increases

A number of stakeholders in the agriculture and bulk sector are advocating for an increase in truck weight limits beyond 80,000 lbs. For example, The Fertilizer Institute is lobbying nationally for increased weight limits up to 91,000 lbs. (with an extra axle) on the Interstates. If the limits were increased to 91,000 lbs. across the County, it would help during seasonal peak periods, as well as addressing some of the challenges with truck driver shortage issues (discussed later in this section). An increase in 10% - 15% in weight limits would mean correspondingly fewer trucks, truck trips, reduced operating costs and increased return on assets. This also presents a challenge for the County; as much of the County system is only able to accommodate loads of 80,000 or less, the County may not be able to take advantage of the efficiencies of increases weights to 91,000 lbs.

3.1.4 Truck Routes, Truck Stops, and Restrictions

Restricted Truck Routes and Truck Routing

Neither the City of Bloomington nor the Town of Normal have formal truck route designations. The City of Bloomington does have a map that documents truck route restrictions. The City notes that restrictions have been made on an ad hoc basis, and can be related to weight issues/limitations or driven by city council members based on area business and resident concerns. As example, restrictions are in place in some locations to limit through trucks in residential areas.

Related to truck routing, the City of Blooming noted that ILDOT at times routes oversize and overweight (OSOW) vehicles through Bloomington on IL-9 instead of routing around town. The City prefers these

trucks to bypass the city to the north and south, as the route is not ideal in terms of pavement or geometrics (e.g. turning radii) for larger trucks.

Truck Stop and Delivery Zone Shortage

There is a shortage of truck stops across the US, which will get worse with new trucking sector regulations (described in the next section). While truck stop shortage has not been quantified in McLean County, stakeholders noted several issues that could indicate a shortage of parking options in the region.

In the Bloomington area, at Exit 160 on the west side of the city (interchange of I-74/I-55 and IL-9/US-150), there is heavy congestion in part as a result of two large truck stops at the exit: Pilot and TA. Then, west of the interchange is a smaller, Circle K, truck stop. Stakeholders noted that TA is difficult to access due to a challenging intersection, but all of these truck stops are busy. Stakeholders noted that this is a place where major interstates converge the truck stops should be bigger and easier to access. While I-55/74 around the west side of Bloomington-Normal was expanded a few years ago to three lanes, which has helped ease traffic, there is probably more opportunity to spread traffic to other interchanges, so not all clustered in a single congested spot.

Related to this issue, both the communities of Bloomington and Normal (Uptown Normal), noted that rear delivery zones are lacking in urban areas, which means sometimes delivery drivers block through routes during peak times while loading/unloading their trucks. While this is an issue, the communities also noted that the blockages are for short periods of time and traffic then returns to normal.

3.1.5 Trucking Industry-Related

Trucking Sector Regulations

According to stakeholders, there are plenty of trucking companies around and willing/able to haul products (e.g., manufacturing, grain, fertilizers, etc.), with the exception of some tightening of supply in peak agricultural season. However, stakeholders noted that the cost of trucking is going up, partly as a result of increasing regulatory burdens placed on trucking companies. These issues are regulated largely at the national level and are thus not unique to McLean County.

The regulatory burden most often highlighted in consultations related to limits on driving time for truck drivers, including enforcement through mandatory electronic logging (e-logging) devices. Federal Motor Carrier Safety Administration (FMCSA) regulations require the installation of e-logging devices on vehicles manufactured after the year 2000 that are part of interstate transportation. These devices cost anywhere from \$500 - \$5,000, and some require payment of a monthly fee.

Another regulation, Hours of Service (HOS), states that interstate truck drivers are now limited to working a maximum of 14 hours (of which only 11 hours can be driving time, with 3 hours for rest stops which are “on duty”). After 14 hours, drivers are required to take a minimum break of 10 hours. Combined with e-logging requirements, there is little opportunity for truck driver flexibility to adjust their working hours.

One stakeholder noted these regulations will likely lead to greater congestion on highways. The majority of shippers ship and receive between 7 AM and 8 PM. Prior to the new HOS requirements, truckers might drive in the middle of the night to get close to their destination, rest for an hour or two early in the morning, and then still make it to their shipper for the morning pick-up. With the current requirements for a minimum of 10 hours of rest, truck drivers will basically have to stop by 9 PM every night to ensure they log 10 hours with no activity, and then all truck drivers will begin again and use key

corridors at 7 AM. This will likely increase congestion at truck stops across the country, much more than there is now.

Related to this issue, both the communities of Bloomington and Normal (Uptown Normal), noted that sometimes delivery drivers block through routes during peak times, instead of making deliveries off-peak. While this is an issue, the communities also noted that at this time they are not interested in advancing any further restrictions or regulations on trucking.

Truck Driver Shortage

Nationally there is a truck driver shortage that is driven by the aging of the truck driver population and the quality/requirements for new drivers (see e-logging and HOS, above). The average truck driver is 49 years old, and many are now retiring. This, combined with a lack of interest by the “next generation of drivers” and industry turnover (which in some markets may be 100%), has some projections showing a need for 100,000 drivers in 2017¹⁰ and 175,000 by 2024.¹¹

In McLean County stakeholders noted that there is a shortage and the main issues are similar to the National picture – the truck driver population is aging and it is difficult to find qualified drivers. Some noted that quality drivers are important as the drivers are the face of the company; they don’t just drive trucks. They are the first point of contact with the customer and must ensure customers’ needs are met. When over the road drivers, who are not familiar with interacting with the customer, switch and haul for the agricultural industry it is a struggle to make the change and meet the demands of the job.

While there is generally not a shortage of trucking companies, during peak season in the agricultural sector (harvest time), there can be a shortage of drivers, and thus difficulties in getting trucks.

3.2 Railroad System Needs and Issues

Rail issues largely fall within private railroad responsibility and control. These issues are not unique to the rail system in McLean County and are provided here as information. In Section 2 an overview of the McLean County rail system was presented. That section included an overview of the high-speed rail program underway, as led by Illinois DOT. While no needs or issues have resulted from that new service, stakeholders did note that with increasing trains in the future that safety and noise (in particular at grade crossings), and service degradation should be monitored over time. This will continue to be monitored over time by the community.

3.2.1 Direct Rail Connections

With some exceptions (e.g., AG Rail), businesses in McLean County note that they do not have adequate and/or access to rail via onsite sidings. It can be challenging to get direct rail service, in particular from Class I railroads such as UP or Norfolk Southern. These railroads are designed to efficiently transport high volumes of goods, relatively quickly on their corridors. They do not often stop to pick up additional traffic at businesses along sidings unless there is sufficient traffic. As example, related to the agricultural nature of the County, if a grain elevator was able to load a shuttle train of 80 carloads or more it may be sufficient to get direct Class I service. Alternately, if customers are located on a regional or short line railroad the load requirement may be less to gain service than on a Class I corridor.

¹⁰ “State of Trucking for 2017: The Driver Shortage,” Trucking Info, December 20, 2017

¹¹ “The never-ending truck driver shortage,” Logistics Management, March 8, 2017

3.2.2 Rail Rates

Rail rates were noted by stakeholders as an issue, but rail rates are always an issue in the agricultural sector. As corn production has dramatically increased over the years and with the glut of corn on the market, the price per bushel has dropped considerably. In 2016 the average price of corn was \$3.40 per bushel. And, in 2016 the average price of soybeans was \$9.50 per bushel. For both of these commodities cost-effective shipping is critical due to tight margins and low profit if high-cost shipping methods are used. For both commodities barge transport is the lowest cost, but large volumes of grain can also be cost-effectively shipped in shuttle trains. Rail rates are dependent on many factors and are in part driven by global factors such as the world harvest and demand for grain. Certainly rail rates are also influenced by whether or not competitive rail service is available. Generally a captive market pays more to ship product.

3.2.3 Railcar Shortage

Railcar shortage/availability was another issue raised by the agricultural sector. This is often an issue during harvest when grain trains unloading at coastal ports are not able to efficiently "turn" (i.e., make a round trip back to the elevator for another loading) due to rail system congestion. However, others noted that railroads have become more efficient at moving grain, perhaps because there is less coal or crude oil traffic in the west so they have the capacity to handle larger harvests. Also, railroads have been consistently investing in their systems so they can continue to provide efficient service as traffic increases.

3.3 Multimodal Needs and Issues

3.3.1 Inland Waterway Lock and Dam Infrastructure

Having access to the inland waterway is key for local agricultural interests, but several stakeholders consulted noted that there is a tension in the County between producing a lot of grain and having to get it to international markets. The lock and dam system facilitates this movement, but infrastructure is in dire need of repair and cannot always be relied upon. The Illinois Farm Bureau noted that patchwork repairs are regularly made, but that lock and dam upgrades are sorely needed to accommodate longer barge tows to meet agricultural demands.

While four locks are traversed between greater Peoria and the Gulf Coast, the two locks closest to McLean County are those in greatest need of repair – the Peoria and the LaGrange Locks and Dams. Both were constructed in the 1930's and are operating beyond their useful life. According to the US Army Corps of Engineers (USACE), the agency with jurisdiction over waterway infrastructure, the maintenance needs of aging infrastructure on the Illinois River has surpassed annual operations and maintenance funding. Limited funding has adversely affected reliability of the system and the USACE has had to rely on a fix-as-fail strategy, with repairs sometimes requiring days, weeks or months. Depending on the nature of a failure and extent of repairs, shippers, manufacturers, consumers and commodity investors can experience major financial consequences.¹²

3.3.2 Multimodal and Intermodal Facilities

As described in Section 2, McLean County lacks multimodal and intermodal container transfer facilities, requiring shippers who need this service to truck their goods 40 miles or more to the nearest option.

¹² Peoria Lock & Dam Fact Sheet, US Army Corps of Engineers, April 2017

Intermodal Facility

One stakeholder noted that they would like access to a multimodal facility that is competitive with the intermodal rail ramps in Chicago without requiring to truck their goods to the Chicago area. They noted that they are stuck using the Joliet, IL area railyards which are accessed via heavily congested interstates, require use of bridges that need repairing, and at facilities themselves shippers incur delay due to the volumes of activity. The stakeholder noted they would like a multimodal rail yard with plenty of space for truck/rail transfer and a rail connection from the Bloomington/Peoria area to Chicago where connections can be made to the east to Montreal/Halifax and west to west coast. They need a multimodal rail yard with plenty of space for truck/rail transfer. It is unclear if this stakeholder is aware of the new development in Decatur that may meet their needs without having to travel to Chicago.

Related to the new Decatur facility, another stakeholder noted that McLean County needs to partner with the facility and begin to orient the County to the south (rather than to the north, Chicago), as it is unlikely that with this development it would make sense to create another similar facility in McLean County.

Multimodal Development

During consultations the Bloomington-Normal Airport Authority indicated there may be a strong opportunity for growth of freight traffic at Central Illinois Regional Airport (CIRA). Approximately 350 acres of the 2,000 acres at CIRA is dedicated to freight, and the Authority believes it could increase this significantly, drawing additional freight traffic, including for the same reasons that FedEx established their facility there in 2015. FedEx moved their regional operations from Peoria thanks in large part to Bloomington being in the middle of a region of 1.8 million residents, and at the intersection of two Interstates. The CIRA can accommodate 767 wide-body jets, and the Authority believes there is opportunity for adding rail transportation and increased warehousing components. As the region is a 2+ hour drive from Chicago and Indianapolis, CIRA could be well suited for serving central Illinois markets with perishables (i.e., fresh flowers, fruits, pharmaceuticals). These conceptual ideas would require further study to validate their potential.

Similar multimodal facility development opportunities were noted as related to the old Mitsubishi site. It was noted that currently the Rivian site has much excess capacity for the size of plant operations during start-up. The excess adjacent road and rail infrastructure could provide adequate infrastructure to increase warehousing, distribution or other light industrial activities at that site.

4 Regional Freight System Recommendations

Key Takeaway

Freight Study recommendations have been grouped within the categories of projects, programs, policies, and partnerships, and have been developed to directly address the freight needs identified through data analysis and stakeholder consultations.

While infrastructure-related recommendations may be viewed as the most tangible recommendations, likely the most important category of recommendations is “partnerships.” As much of the multimodal freight transportation system is not within the public (or MCRPC’s) domain, partnerships and collaboration will be critical to advancing any efforts off the highway system. And, in most cases, even projects on the highway system require partnership due to the multiple jurisdictions that have interest, ownership or operations roles in the County. The ability of MCRPC to establish and sustain partnerships with the various public and private sector owners, operators and maintainers of the multimodal freight transportation system will ensure, at a minimum, freight is “at the table” in regional transportation planning and investment discussions.

4.1 Summary of Freight System Recommendations

Using the combination of data analysis and stakeholder consultations, a slate of freight system recommendations was developed. These recommendations, shown in Figure 4-1, are generally grouped within the (the “4 P”) categories of projects, programs, policies, and partnerships. Stakeholders often find infrastructure-related recommendations to be the most tangible, however likely the most important category of recommendations is “partnerships.” As much of the multimodal freight transportation system is not within the public (or MCRPC’s) domain, partnerships and collaboration will be critical to advancing any efforts off the highway system. And, in most cases, even projects on the highway system require partnership due to the multiple jurisdictions that have interest, ownership or operations roles in the County.

Figure 4-1: Summary of Strategic Freight System Recommendations

Projects	Policies
<ul style="list-style-type: none"> • Strategic roadway system investments <ul style="list-style-type: none"> ○ Pavement improvements (primarily related to ensuring 80,000 lb., or higher, capabilities) ○ Bridge improvements (primarily related to ensuring 80,000 lb., or higher, capabilities) • Other spot highway infrastructure improvements to address congestion and safety 	<ul style="list-style-type: none"> • Development guidelines to focus new freight-oriented development in areas where zoning exists and to minimize development sprawl • Road user agreements for new and expanded freight-oriented development
Programs	Partnerships
<ul style="list-style-type: none"> • Freight planning program • Program focused on highway and railway safety, especially in urban centers • Program focused on using technology to better manage the (freight) transportation system 	<ul style="list-style-type: none"> • Establish key partnerships to better understand freight system needs and work toward advancing strategies to improve the County’s freight system and its connections

4.2 Project Recommendations

Infrastructure investments that could benefit the freight system and users were identified through primarily through review of established state and local planning documents and then validated through stakeholder consultations. The key planning documents that were reviewed to ensure freight benefitting projects continued to be advanced locally included, the Roadway Infrastructure Prioritization Report: McLean County, IL, Prepared by Hansen for McLean County and the Illinois Soybean Association (2015), and the Illinois State Freight Plan (2017). A list of projects to advance, and areas to monitor, in the future is provided in the following subsections.

Recommendation 1: MCRPC should support the advancement of these and other freight benefitting roadway projects.

4.2.1 Targeted Infrastructure Investment

In consultation with public and private sector stakeholders most noted that large new infrastructure investments are not needed. However, targeted infrastructure investments should be made to ensure the existing system is best preserved.

Roadway Infrastructure Prioritization Report: McLean County, IL

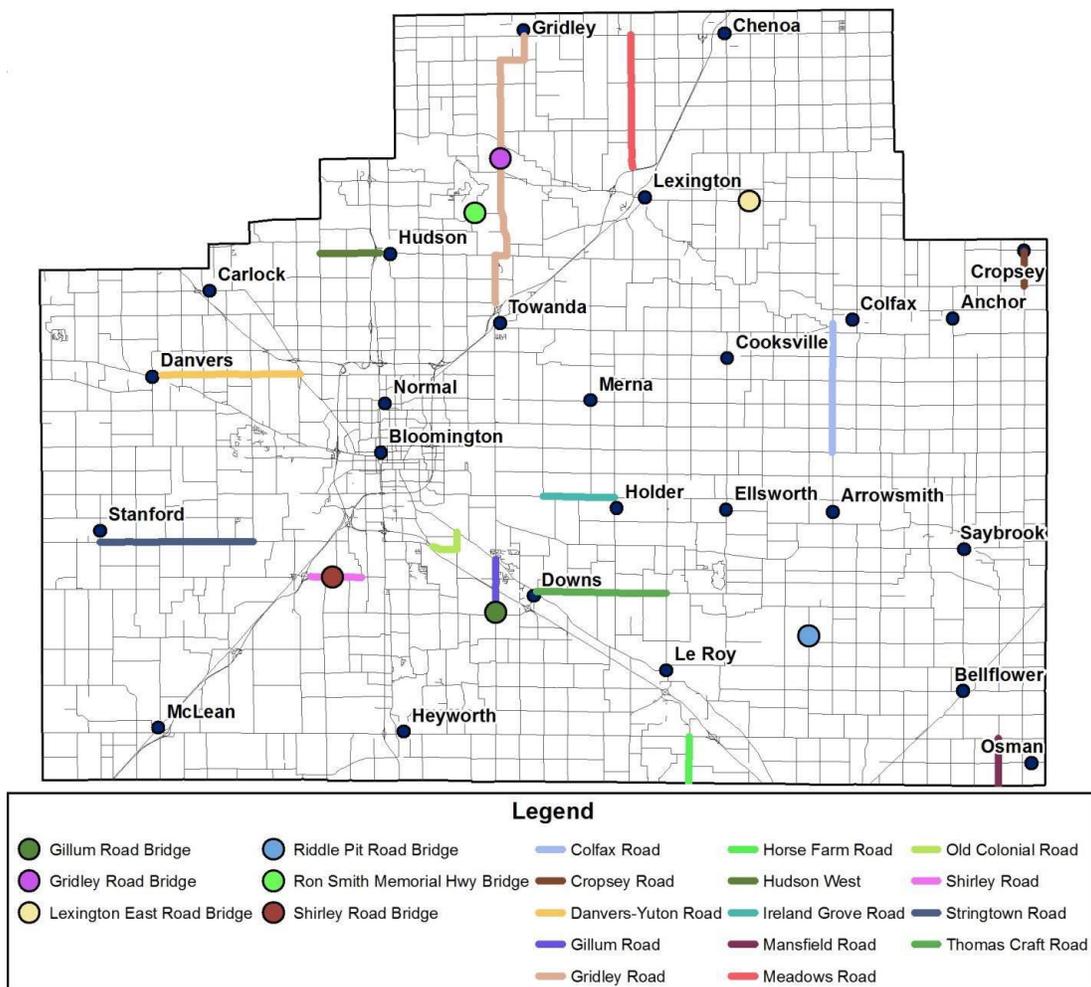
In 2015 McLean County in partnership with the Illinois Soybean Association conducted an analysis of roadway infrastructure critical to the agricultural industry and prioritized investment needs.¹³ The roadway system needs identified and the specific projects recommended in that Report are similar to

¹³ Roadway Infrastructure Prioritization Report: McLean County, IL, Prepared by Hansen for McLean County and the Illinois Soybean Association, July 2015

those recommended by stakeholders during Freight Study consultations. In all, twenty projects were recommended that fall into one of three categories: resurfacing project, reconstruction project, or bridge project. The following figures highlight the projects, what solutions are recommended and probable costs. This list was developed in 2015 and has not been updated to reflect any projects that have advanced since the recommendation. The projects recommended in that Report include:

- **Resurfacing Projects.** Five out of the six resurfacing projects involve milling off the top layer of the existing Hot-Mix Asphalt (HMA) pavement and replacing it with new HMA pavement. The pavement structure will be designed to carry 80,000-pound vehicles. The sixth project is the Cropsey Road (CH 1) project which will look at chip sealing the existing HMA pavement.
- **Reconstruction Projects.** The reconstruction projects involve rebuilding chip sealed roadways with an HMA surface. The roadways will be rebuilt to the ILDOT Bureau of Local Roads (BLR) standards, which may involve widening the roadway surface and/or the shoulders.
- **Bridge Projects.** The bridge projects will rebuild the bridges to ILDOT BLR standards and will be designed to carry 80,000-pound vehicles. These projects may result in more efficient truck routes through the county.

Figure 4-2: Map of County Roadway Infrastructure Improvements



Source: Roadway Infrastructure Prioritization Report: McLean County, IL, Prepared by Hansen for McLean County and the Illinois Soybean Association, July 2015.

Figure 4-3: Probable Costs of County Roadway Infrastructure Improvements

Project	Co. Highway Number	Proposed Improvement	Opinion of Probable Costs
Colfax Road	CH 15	Resurfacing with HMA	\$ 1,475,000.00
Cropsey Road	CH 1	Resurfacing with Oil and Chip	\$ 62,000.00
Danvers-Yuton Road	CH 18	Resurfacing with HMA	\$ 1,850,000.00
Gillum Road	CH 29	Resurfacing with HMA	\$ 1,100,000.00
Gillum Road Bridge	CH 29	Bridge Reconstruction	\$ 1,100,000.00
Gridley Road Bridge	CH 29	Bridge Reconstruction	\$ 5,000,000.00
Gridley Road	CH 29	Resurfacing with HMA	\$ 4,350,000.00
Horse Farm Road	CH 21	Roadway Reconstruction	\$ 2,500,000.00
Hudson West	CH 12	Roadway Reconstruction	\$ 3,000,000.00
Ireland Grove Road	CH 28	Roadway Reconstruction	\$ 4,500,000.00
Lexington East Road Bridge	CH 8	Bridge Reconstruction	\$ 450,000.00
Mansfield Road	CH 3	Roadway Reconstruction	\$ 2,500,000.00
Meadows Road	CH 23	Roadway Reconstruction	\$ 8,250,000.00
Old Colonial Road	CH 30	Roadway Reconstruction	\$ 2,400,000.00
Ridde Pit Road Bridge	CH 15	Bridge Reconstruction	\$ 700,000.00
Ron Smith Bridge	CH 63	Bridge Reconstruction	\$ 1,500,000.00
Shirley Road	CH 34	Roadway Reconstruction	\$ 2,500,000.00
Shirley Road Bridge	CH 34	Bridge Reconstruction	\$ 675,000.00
Stringtown Road	CH 32	Resurfacing with HMA	\$ 2,200,000.00
Thomas Craft Road	CH 36	Roadway Reconstruction	\$ 7,875,000.00
			\$ 53,987,000.00

Source: Roadway Infrastructure Prioritization Report: McLean County, IL, Prepared by Hansen for McLean County and the Illinois Soybean Association, July 2015.

4.2.2 Other Roadways to Monitor

Illinois DOT Identified

In October 2017 the Illinois DOT completed the Illinois State Freight Plan. As part of the Plan, highway freight bottlenecks were identified where roadways performed poorly in terms of truck delay or unreliability. According to that Plan, a roadway segment was categorized as a bottleneck if it ranked in the top five percent of all roadway segments analyzed in terms of truck delay, unreliability, or both.

Overall, nearly 520 miles of roadway in the state were classified as truck bottlenecks, representing 2.4 percent of the NHS roadway miles analyzed. Bottlenecks were classified by severity, where severity was defined as the summation of the percentile rank of the bottleneck segments in terms of delay and unreliability. In other words, based on classifications of High, Medium, and Low, a location classified as a “High” would tend to rank in the top third of bottleneck locations in both delay and unreliability.

The majority of bottlenecks were located in and around the Chicago metropolitan area. To be precise, 474.2 miles of the 516.9 bottleneck miles (91.7 percent) were located in greater Chicago. 42.7 miles of bottlenecks were identified in other parts of Illinois, representing 8.3 percent of the bottleneck miles

identified. The figure below identifies bottlenecks identified in McLean County using the Illinois DOT identification process. These locations should continue to be monitored locally.

Figure 4-3: McLean County Truck Bottlenecks (as Identified by Illinois DOT)

Type of Road	Road Name 1	Road Name 2	Road Distance	Road Direction	Bottleneck Tier	Link ID	TMC
Other Highway	Chester Street	IL-251	2.33869	Northbound	Low	108739910	107P11562
Interstate	I-39	I-39	0.06141	Northbound	Medium	20008635	107P05356
Other	US 51 BR	0	0.17213	Southbound	Medium	108739824	107N06182

Source: Illinois Department of Transportation Freight Plan, Prepared for Illinois DOT, Prepared by WSP, Oct. 3, 2017.

Locally Identified

Consultations with the City of Bloomington and Town of Normal both indicated that there is little problematic congestion and the system works relatively well to meet freight transportation and business needs. Spot locations for continued monitoring are noted below.

City of Bloomington

- Hamilton Road/Fox Creek Road – 4 lane road, but 2 lanes over rail overpass (the City is working with UP and Illinois Commerce Commission to upgrade bridge to 4 lanes).
- Hamilton Road (between Bunn Street and Commerce Parkway) – most 4 lanes, but this is a major gap in the system (no road).

Town of Normal

- IL-9/US-150 and I-55 on/off ramps is the location of a truck stop with constant truck traffic.
- The new Destihl Brewery is beginning to grow and due to Illinois state law needs to work with distributors due to its size of production. The adjacent infrastructure will need to be upgraded to accommodate increased truck traffic. As example:
 - Greenbrier Drive – Menards accesses from the back, so this will be the first big generator on road.
 - Hershey Road (between Shepherd Road and Raab Road) being converted from hot mix asphalt to concrete.
 - Some light industrial could be added in this area in future to make better use of improvements underway.

4.3 Policy Recommendations

4.3.1 Development Guidelines

The population of McLean County grew by 45% between 1980 and 2015. As the County, and particularly Bloomington and Normal grew, the transportation network expanded to serve newly developed land. As a result, land use patterns changed and a number of land use-related issues arose including a zoning-development mismatch, underdeveloped brownfield areas, and limited access to developable land.

Zoning-Development Mismatch

As Bloomington and Normal have grown, the community's vision for land use, particularly in the Bloomington central city area has changed. Historically, much of Bloomington's manufacturing was located adjacent to railroads, which provided businesses with connections to markets across Illinois and the nation. These railroads cut through the center of the city, and neighborhoods grew nearby to support local manufacturers and other industrial firms.

Today, however, many firms do not need railroad access, and their freight operations that generate high truck volumes may put them in conflict with the desires of surrounding neighborhoods. Stakeholders consulted have also noted that it may be more desirable to develop the urban centers of Bloomington and Normal into vibrant communities where downtown living, walking, and biking to destinations are preferred. As a result, some of Bloomington's freight firms have left the central city, leaving behind potentially polluted properties commonly referred to as brownfields, or have had to adapt their operations to meet the needs of surrounding neighborhoods.

Brownfields

Brownfields are former industrial or commercial properties that may be contaminated as a result of their previous use. The potential costs and legal liability associated with cleaning up contamination at brownfield sites make them unattractive for developers, and thus brownfields often sit vacant.

Despite their potential contamination, brownfield sites may have some development advantages for freight-related industries like manufacturing, warehousing, or transportation. Since brownfield sites often hosted previous industries, they may be advantageously located near to major rail corridors or road corridors. They also may be large in size, making them ideal for industries or uses that require larger consolidated parcels. This is the case for the former Chicago and Alton Railroad's Bloomington facilities, which were used to maintain railroad equipment, and today is the site of AG Rail. However, brownfields may also be adjacent to incompatible land uses, like residential neighborhoods. Ultimately, planners and developers must weigh competing priorities of economic development, public health, environmental protection, and quality of life when considering redevelopment of brownfield sites.

Access to Developable Land

In addition to providing appropriate development opportunities/land in the County (as noted in the two examples above), stakeholders noted that it is also critical for developable land to have good transportation access and be easily served by utilities. As example, Shelbourne Drive (Old Route 66) has access off of, but not on to, I-55. While developable land exists here, in a suitable location outside the urban area, the lack of access to the interstate makes it difficult to attract development. Another example is in the northern portion of the Town of Normal where land is available for development north of I-55, but it is expensive to extend utilities under the interstate. It is unlikely that land northwest quadrant of I-74/I-55/I-39 will be developed due to this.

Recommendation 2: As part of comprehensive planning activities, MCRPC should establish development guidelines to focus new freight-oriented development in areas where zoning exists and to minimize development sprawl.

4.3.2 Road Use Agreements

This recommendation is also generally linked to Partnership Recommendations – Funding Sustainability.

Several stakeholders noted that there is a great need for securing adequate funding to maintain the County roadway system. As example, as previously noted, weight limitations that restrict the movement of trucks loaded with 80,000 lbs. of grain are a result of worn or inadequate pavement.

McLean County’s other agricultural-related focus is on providing last mile connectivity between farms and elevators. Farmers have built more storage on their farms, enabling them to ship out grain steadily (and also take greater advantage of pricing) rather than having to deliver all the grain to elevators or processing plants at harvest time. It is also expected that there will be increasing consolidation of the smallest elevators, with fewer elevators handling larger volumes, and increasingly operated by larger entities (e.g. co-ops, feed and grain companies, farmer entrepreneurs that bring family members into the business). This is currently happening in McLean County and the County is challenged with how to best provide and maintain last-mile connections to these new, large facilities.

As example, a new grain elevator is being developed west of Chenoa, IL off of US-24. This 2,000,000 bushel capacity facility is serviced by TPW rail and is on a township road. The County is working on establishing a type of “road use agreement” to extend an 80,000 lb. road to the elevator. The company developing the Chenoa facility owns a dozen other elevators and will use this elevator as a consolidation point. The county was concerned about what this may mean to pavement wear and that is why the road usage agreement will be so important – to ensure funding is available for continued maintenance of the system.

Recommendation 3: MCRPC should work with the County to explore how “road use agreements” and other funding approaches could be used to ensure funding is available for continued maintenance of the local system as truck movements increase in spot locations (i.e., new large grain elevators).

4.4 Program Recommendations

4.4.1 Freight Planning Program

As MCRPC does not construct, own, operate or maintain any part of the freight transportation system, it is critically important that the agency establishes a transparent process to including freight perspectives in their activities. This will not only produce a more comprehensive slate of needs and recommendations but ensures opposition to projects or other recommendations is minimized while building trust and nurturing relationships for expanded engagement and partnership in the future.

There are several small steps that MCRPC can take to better incorporate freight into the agency's planning and decision-making processes over time.

- **Develop Freight-Specific Evaluation Criteria.** MCRPC should incorporate one or more freight-specific performance measures in plan and project evaluation. A quick win is including a performance measure related to freight system mobility (Truck Travel Time Reliability (TTTR)), an FHWA required performance measure that will need to be calculated at both state (by Illinois DOT) and MPO levels in 2018.
- **Monitor Freight Needs and Identify Options to Address Needs.** The purpose of developing freight-specific evaluation criteria is so that the transportation system can be assessed through a “freight lens.” As these criteria are gradually applied, the results of the performance analysis should be used to quantitatively identify freight system deficiencies and

their potential solutions. They should also be used to monitor progress toward meeting set goals.

- **Conduct freight studies.** As the need arises, MCRPC should conduct freight and economic development related studies to assess the need for various solutions and public or private investments. As example, in the future the need to study freight-related development at or adjacent to the airport may arise.
- **Approval of Plans and Projects.** All MPO plans must go through a public review process to receive final approval. It is important to ensure that all invitations and public notices are available to local business and industry, there is also benefit in identifying a few key freight stakeholders that can be available and maintain involvement during the entire plan development process.
- **Private Sector Engagement.** While there are several opportunities for MCRPC to make small tweaks to integrate freight into its on-going planning activities, none is of greatest importance than ensuring freight stakeholders are part of the short- and long-range planning processes. It is recommended that stakeholders engaged during development of the Freight Study continue to be engaged on a regular or semi-regular basis, in line with available MCRPC resources.

A key tool for conducting many of the tasks noted above is a travel demand model that reflects freight activity. A report on the next steps MCRPC should take to incorporate freight in their regional travel demand model was developed as part of this Freight Study. It is anticipated that developing this tool will be an immediate next step for MCRPC.

Recommendation 4: MCRPC should formalize a freight planning program as part of their activities to identify and address freight system needs, and to ensure freight system stakeholders are an ongoing and integral part of MPO transportation planning processes.

4.4.2 Freight Safety Program

Suggest this program be linked to ongoing transportation safety programs pursued by MCRPC. This recommendation is also generally linked to Partnership Recommendations.

Several stakeholders noted that planning should be coordinated related to emergency response to freight train derailments so communities can respond appropriately. During the course of this Freight Study a UP train derailed in Elkhart, IL. This train was on the UP track that passes through Uptown Normal, traveling from East St. Louis to Chicago. Eighteen of 77 cars derailed, which included two cars carrying hazardous materials. Those cars remained upright and did not leak.¹⁴ While the track was closed, Amtrak boarded/alighted all train passengers at the Uptown Normal train station and bussed them around the incident.

Recommendation 5: MCRPC should ensure that freight highway and railway safety is considered as part of all planning activities, especially in urban centers

¹⁴ "Freight train derailment causes mess in Elkhart," The State Journal-Register, May 16, 2017

4.4.3 Freight Technology Program

Suggest this program be linked to ongoing transportation technology programs pursued by MCRPC. This recommendation is also generally linked to Partnership Recommendations.

Stakeholders consulted noted that it would be beneficial to them if additional information on truck routes, congestion locations, travel times and parking options were accessible. Currently ILDOT provides real-time statewide information on several of these and other items including truck routes, congestion and construction activity, alternative fueling locations and weather information via their web portal.¹⁵ It was not clear if the stakeholders were aware of this. One feature that the Illinois DOT web portal does not provide is truck stop information including location, on-site amenities, and parking spot availability.

Recommendation 6: MCRPC should ensure that freight technology applications are considered as part of all planning activities, to better manage the transportation system and to advance lower cost transportation solutions.

4.5 Partnership Recommendations

In McLean County there are numerous stakeholders that touch the freight system. The McLean County Regional Planning Commission's major role relates to the coordination of long range transportation system planning, forming regional transportation policy, and making programming decisions to best apply Federal transportation dollars to regional needs. Noteworthy is that MCRPC does not construct, own, operate or maintain any part of the system.

Most other public sector stakeholders, such as the Illinois DOT, McLean County, the City of Bloomington and Town of Normal each have responsibilities similar to MCRPC, but in addition construct, own, operate and maintain the highway transportation system within their jurisdictions. Each of these public sector entities collaborates with each other and with MCRPC to ensure that plans coordinate, not compete, with each other. In some cases, these public agencies expand their planning and involvement beyond simply the highway system. As example, each agency has an interest in understanding how highways are connected to other transportation modes via last mile connectors or at multimodal and intermodal facilities. To accomplish this, agencies such as MCRPC and Illinois DOT have taken lead roles in examining the multimodal transportation system, including how both passengers and freight use the system, to build awareness of needs and issues. This has been particularly important in McLean County as the Illinois High-Speed Rail service is dependent on the use of freight railroad tracks. Additionally, the USDOT now provides grant and formula funds that can be used toward non-highway freight projects, therefore it is more important now than ever to have a consolidated view of the freight transportation system and its multimodal needs to make the best use of those funds.

Other key transportation system stakeholders have varying roles in specific modal components of the system. Freight railroads (such as Union Pacific, Norfolk Southern, and others) are entirely responsible for their own systems, investing their revenues back into the system for construction, operations, and maintenance. Airports are also responsible for each of these elements within their gates.

Other stakeholders such as economic development organizations and businesses and their advocacy associations have an interest in ensuring the transportation system meets their needs, however, absent an ownership role often contribute financially towards public agency projects of mutual interest/benefit.

¹⁵ <https://www.gettingaroundillinois.com/>

4.5.1 Planning Coordination

While the McLean County highway system is well developed, has good connectivity with interstates, and is fairly well maintained, due to the rural nature of the county, McLean County connections to rural areas outside the county are not as well developed. One stakeholder noted that Illinois generally suffers from lack of coordinated transportation planning, and that MCRPC could give greater focus to formalizing regional cooperation since freight sees no borders across county lines. While it is not intended for MCRPC to take on the role of Illinois DOT, there are several instances where it could make sense for the MPO to coordinate beyond its MPO borders. As example, to ensure connections are in place for local business to access Illinois River port facilities, to ensure lock and dam infrastructure improvements continue to be part of the Region’s dialog, and to consider how local business interests may be impacted/benefited by the new intermodal container transfer facility in Decatur, IL.

Recommendation 7: MCRPC should utilize its experience as a coordinator to ensure freight transportation planning needs and stakeholders are identified and consulted as part of all planning activities.

4.5.2 Collaboration and Consistency between Bloomington and Normal

The City of Bloomington and Town of Normal are immediately adjacent to each other, and while coordination between the communities does exist, it is important that in terms of freight planning this coordination continues and is deliberate.

Stakeholders from both Bloomington and Normal noted the need to work in concert with each other when trucking restrictions or policies are advanced in the communities. Having policies that are in sync with one another will not put one community at a competitive disadvantage over the other. Currently the communities are of the same view that truck traffic in their communities is not detrimental to business and that parking, loading n or route restrictions need to be considered at this time.

Similarly, Bloomington and Normal each have Complete Streets policies. Bloomington adopted their policy in 2016, and Normal adopted before that. Both plans fully considered pedestrians, bicyclists, cars, and transit, but did not provide special considerations for trucks. Both communities noted that it would be beneficial to them to receive some guidance on how trucks should be considered in these policies going forward.

Recommendation 8: MCRPC should serve as a neutral coordinating point to ensure there is planning consistency between these neighboring communities.

4.5.3 Funding Sustainability

This recommendation is also linked to Policy Recommendations – Road Use Agreements.

There is a great need to secure and preserve Federal, state and local funding for transportation system maintenance and preservation and to be aware of funding needs outside the County to ensure the multimodal freight system is sustained for McLean County businesses.

Stable State Transportation Funding

In November 2016, Illinois voters approved the Safe Roads Amendment to the Illinois Constitution, also known as the “lockbox” amendment, which is intended to ensure that transportation-related funds (e.g., as derived from the motor fuels tax, driver’s license fees, etc.) are not used for other, non-transportation purposes. This amendment was supported by McLean County businesses, advocated for by the McLean

County Chamber of Commerce, and was viewed as critical to continued transportation system improvements, as in the past transportation funds have been diverted for other purposes.

While the lockbox amendment is a good step for transportation in Illinois, it only protects existing transportation funds – it does not generate any new revenue. Several stakeholders noted that the State also need to advance a comprehensive infrastructure funding bill so worthy transportation projects can be constructed and so that, as opportunities arise, Federal dollars can be leveraged. They noted that without a state plan, Illinois risks losing federal money to build roads, bridges, rail, air, and improved waterways.

Waterway System Funding

As previously noted, the lock and dam infrastructure on the Illinois River is aged and in dire need of repair and/or upgrading so that it can efficiently accommodate modern barges and meet shipper needs. The Illinois Chamber of Commerce and industry partners have studied the importance of improving locks and dams on the Illinois River extensively,¹⁶ and have advocated for increased funding to make improvements.

New locks and dams were authorized in the 2007 WRDA legislation, but federal resources were not appropriated. And, the costs for improvements is not negligible. As example, a 2005 USACE study on the LaGrange Lock and Dam estimated the cost of major rehabilitation at \$72.6 million to include resurfacing the lock concrete and horizontal surfaces and constructing new downstream bulkhead recesses. The estimate for major maintenance was \$22.9 million and would include constructing a new lock control system, adding a new lock power system, miter gate and culvert valve machinery and bubbler system and adding new emergency generators.

Costs for LaGrange's major rehabilitation would be jointly funded by a 50% federal, 50% Inland Waterways Trust Fund split. Major maintenance, on the other hand, would need to be funded completely by federal operations and maintenance funds. From 2005 to 2010, Congress appropriated approximately \$62 million for the planning and design of the navigation and ecosystem projects, which included a new 1,200-foot lock at LaGrange. Approximately 15% of the design and planning work was completed for this project when work was suspended in 2011 due to lack of funding.

Stakeholders note that continued advocacy for these project vital to agricultural commerce should be advocated for by McLean County entities, perhaps in a manner similar to that of the Illinois Chamber.

Recommendation 9: MCRPC should coordinate with local public sector and industry partners to ensure the transportation system needs in the County are understood by all, and to advocate for adequate funding and investment to maintain the transportation system.

¹⁶ An Economic Impact and Cluster Analysis of Illinois River Lock and Dam Facilities for Beneficial Users, Prepared by EDR Group, August 2016