

Regional Freight System Planning Recommendations

Regional Framework & Policy Recommendations

Draft

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prepared for

Chicago Metropolitan Agency for Planning (CMAP)

prepared by

Cambridge Systematics, Inc.

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Note: This draft technical memorandum, containing Sections 3.0 and 6.0, represent content excerpts that will be included in the complete Regional Freight System Planning Recommendations Study. These sections are linked for the purpose of understanding the "bundles" within which the policy recommendations have been grouped. This document is not intended to represent the full scale of recommendations proposed for the region.

3.0 Regional Freight Framework

Greater Chicago has a myriad of stakeholders with competing interests, but oftentimes with a common aim: to personally succeed and to be part of a region that prospers. However, lacking an understanding of what those common aims are, it is very difficult to band together and work toward them. establishment of a Regional Freight Framework that explains common interests and unifying principles will help define when investments need to be made, where investments should be made, and who should make the investments. As an example, partners in the south suburbs have actively pursued warehousing and distribution development and, as a result, have benefited by receiving the many jobs that are associated with that industry's growth. In fact, tremendous growth has resulted and the area is poised for even more. But the region must ask itself: Is infrastructure available to support this growth? Is this the regionally-agreed location for Greater Chicago's freight and logistics industry growth? As the entire region and nation benefits when the Chicago freight hub grows, who needs to invest in the growth - just local agencies, or should consideration be given to other regional, national, and private funding sources?

Several important inputs that shaped development of the Regional Freight Framework are described in Section 2.0 (Freight Trends). In this Section 3.0, two more critical inputs for setting the Regional Framework are introduced: (1) core freight planning principles (explained in Section 3.1) are used as a method of organizing and understanding critical linkages; and (2) input from key regional transportation and policy stakeholders on how these principles can be applied to the Chicago region (summarized in Section 3.2).

3.1 CORE FREIGHT PLANNING PRINCIPLES

The Regional Freight Framework in the Greater Chicago region should respond to current needs and create guiding principles for future development. It should address communities' current transportation, social, economic, and environmental needs, but also should create a long-term framework for development and investment. An effective Framework must address:

- Roles of freight services in meeting the transportation needs of businesses, communities, and the state, regional, and international economies in the short and longer term (2040 and beyond);
- Local government interests in freight, and options for public participation in freight through actions such as direct investment, financial incentives, regulation, planning, and advocacy;
- Linkages between government actions on freight and the region's environmental, energy, development, land use, social, and fiscal goals;
- Expected benefits, costs, and risks to rail transportation stakeholders;
- Key performance measures; and
- Procedures for updating recommendations as the Chicago region's freight transportation system evolves.

Above all, a successful Framework must recognize the linkage between investment in the system and future social, economic, and environmental outcomes, as illustrated in Figure 3.1.

The Chicago area's ability to compete goes beyond being industrious and having a strong work ethic, but also demands an efficient freight transportation system that can deliver products reliably and on time. As one of the busiest hubs of the country, close to the geographical center of the nation's economic activity, overall U.S. growth also has a direct bearing on the functioning of Chicago's transportation system. The expansion of the U.S. economy translates to more goods being shipped through and processed in Chicago area transportation facilities. For these reasons, the decision-making process regarding the future of metropolitan Chicago's freight-related infrastructure needs to incorporate and respond to the intrinsic growth conditions of the region, as well as to the significant transportation and economic roles it plays within the greater U.S. economy. Investments should improve travel time, cost, reliability, and connectivity.

The relationship between freight activity and the Chicago area's economy is strong. For example, industries rely heavily on the efficient movement of goods, both for the outbound shipments of their products to reach worldwide markets, as well as for inbound shipments of intermediate goods required for production. In addition to freight transportation's importance to metropolitan Chicago's industries, efficient multimodal freight transportation systems can help to minimize the cost of consumer goods to regional residents as well as for people in large parts of the country. Transportation infrastructure improvements that reduce costs by either: 1) lowering travel times; or by 2) increasing the reliability of on-time shipments translate directly into benefits for the Greater Chicago economy.

Competitiveness

Productivity Market Access

Travel Time Cost Reliability Connectivity

Freight Transportation Improvements

Figure 3.1 Linking Freight Improvements to Economic Growth and Social and Environmental Goals

Source: Cambridge Systematics.

Done well, investment in the freight system will contribute to a more competitive economy and a society that makes best use of its capital, knowledge, and labor. And, in a world looking to reduce petroleum use and greenhouse gases, many investments in freight transportation can result in a more energy-efficient and lower-emission transportation system.

Freight is a derived demand. Freight volumes, origins, destinations, and commodity types reflect the interactions between and among populations and industries. Therefore, the Regional Freight Framework must be rooted in an understanding of freight movements in the Chicago region. The Regional Freight Framework must also be rooted an understanding of how demographic and industry trends impact the current conditions, future conditions, and performance of the freight transportation system.

The growth of freight volumes in the Chicago region will be influenced by transportation demand factors. These factors include socioeconomic factors such as overall population and employment growth, changes in national and global logistics patterns, and the evolution of the region's industry structure. Industrial growth in areas ranging from manufacturing to business services and tourism will affect freight demand. On the supply side (i.e., the provision of freight transportation infrastructure and quality freight services), the condition of the Chicago region's roadway and railway networks will affect, positively or negatively, the overall competitiveness of the regional and national economies.

Figure 3.2 details the critical elements that should be considered in Framework development. This illustration highlights the interconnected nature of the freight system. The importance of each element is described below.

Figure 3.2 Freight Transportation System Elements



Source: Cambridge Systematics.

- Economic Structure. Freight demand is driven by many economic factors, including business type, growth, and location, as well as population growth, income, and clustering. Understanding this information is critical to determining what freight is moved into, out of, through, and within the Chicago region. In addition, insightful projections for future economic and population characteristics can help determine the future regional freight demand.
- Industry Logistics Patterns. It is critical to understand key trading partners, logistics strategies, and supply chain and distribution patterns used by businesses in the Chicago region. In addition, it is important to understand what transportation system components they rely on, how their goods movements impact the system now, and how their transportation system needs may change in the future.
- Freight Infrastructure. Understanding the extent of the physical freight system the highways, rail lines, airports, waterways, and intermodal connectors will help the Chicago region freight stakeholders to determine how well the system is serving the shippers, receivers, and carriers that depend on it. It is also important to gauge the ability of the

system to keep up with economic growth and evolving logistics strategies and needs.

- Commodity/Vehicle Traffic Flows. Understanding how commodities and vehicles use the freight transportation system is also an important step towards identifying needs, deficiencies, and bottlenecks.
- Organization and Public Policy. Organizational structure and public policy affect freight transportation in the Chicago region, and often affect the degree to which freight issues are addressed in transportation planning and investment activities. In order to develop relevant recommendations that will dovetail with existing programs and policies, an understanding of public policy and organizational impacts is critical.

The Regional Freight Framework must recognize the linkages between the freight transportation system and the overall economic health of the Chicago region. Understanding and addressing goals for all of the system elements is a vital part of successful freight planning. These will be further explored in detail in Section 4.0 (stakeholder outreach) and Section 5.0 (data analysis).

3.2 Framework Charrette

During a Framework Charrette (held on August 11, 2009 at CMAP's offices and with ten participants representing a diverse set of regional transportation and policy stakeholders), stakeholders discussed how the core freight planning principles could be applied in the Chicago region and shaped into Regional Freight Framework Themes. Several of the key findings of the Framework Charrette are summarized below. The topics of discussion mirror the interrelated categories of the freight system introduced in Figure 3.2.

Economy

- Economic trends indicate that Chicago is becoming a more serviceoriented economy (shifting away from a manufacturing dominated economy). This trend follows a pattern similar to New York City.
- If Chicago's economy will be highly service-oriented, we will need to handle high-value merchandise cost-effectively. There will be a need to maintain quality of life and get products to market cost-effectively.
- There is a great deal of uncertainty in the goods movement industry due to the current economic climate. It is difficult to pinpoint trends in Chicago as recession is changing the game.
- Processing of raw and agricultural goods appears to be an opportunity for economic growth in the Midwest.
- The significant growth in Will County jobs is mostly related to the warehousing and distribution industries.

- Chicago should work to retain rail in Chicago for the economic benefits, notably the growing opportunities for intermodal freight handling employment.
- The link between freight and economic development gets little publicity and should be further emphasized.
- Public sector decision makers need to recognize that the proportion of public investment in the logistics/freight industry is small relative to private investment in the industry.

Industry Logistics Patterns

- While Chicago is a freight hub for transfer of goods, it is also the first or last mile for a significant portion of goods traveling in the region.
- Railroads have tried to use more unit trains to expedite loads but the market isn't there, resulting in stopped service.
- The future will rely more heavily on the Panama Canal due water-route cost advantages. However, the Panama Canal may not completely shift flows to the East coast seaports because an all-water route will still be more time-consuming and the biggest ships won't fit.
- Asian manufacturing may wane due to transportation costs. More manufacturing may be located in Mexico.
- Supply chains are tending to be longer and Chicago is likely at the end of the chain, where products go to market.
- Investments are being made now (e.g., CREATE) to shore up Chicago's position in the national/international supply chain. Railroads' strategy is that Chicago will continue to be the most important national rail hub.
- Without mitigation of issues related to the freight system, communities will get the backlash from local conflicts, which could impact system usage.

Freight Infrastructure

- Infrastructure needs to fulfill carrier needs. Otherwise, products won't be shipped to Chicago for long-haul trips.
- Roadways around intermodal hubs need to have increased capacity to accommodate freight needs in the future.
- A CREATE for Trucks program, driven by industry-defined key chokepoints and problems, could be beneficial.
- Warehousing/distribution will be more concentrated on the south and southwest parts of the region.
- Rail investments on the southern portion of Chicago could benefit future freight flows.

 The public sector must continue to partner with the private sector, recognizing that private decisions will drive system investment. These system investments will have public benefits and costs. The public sector must represent the needs of constituents, particularly in the areas of safety and quality of life.

Commodity/Vehicle Traffic Flows

- Rail capacity is an area of concern, raising questions of whether Chicago
 has the capacity to absorb future growth, how much of future rail
 capacity will go to passenger traffic, and how the intermodal traffic
 supply chains will shift.
- It is clear, however, that rail investments in the region are shoring up Chicago's position as a transportation hub. The railroad strategy is to retain Chicago as an intermodal hub; rail is unlikely to abandon Chicago investments in facilities.
- It appears that most of the growth in freight tonnage will be by truck mode. The region needs to consider whether shifting some of this tonnage to rail will be beneficial. To improve economy and efficiency for all transportation system users, restrictions on truck traffic, such as delivery time restrictions, need to be addressed through such strategies as providing nearby parking or modifying the restrictions to facilitate offpeak truck travel.

Organization and Public Policy

- The Chicago region needs to be more proactive to ensure national congressional representatives support the Chicago region as a critical inland freight hub.
- CMAP's Developments of Regional Importance provides an opportunity to address freight needs. Strengthening this process may benefit the freight industry in the future.
- Freight planning must address public quality of life issues to avoid backlash, including:
 - Intermodal facilities' impact on local traffic;
 - Delays and safety concerns at grade crossings;
 - Lack of publicly-accessible information on rail hazardous material transport; and
 - Interest in lower-impact transportation modes, such as waterway transport.
- The STB should consider quality of life impacts in addition to business impacts.

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- Trucking delivery time restrictions are a major issue for truck efficiency.
 A lot of mitigation is already in place to prevent externalities the perception of negative impacts of night deliveries may be greater than reality.
- Developing a mechanism to coordinate regional investments should be a priority.

6.0 Policy Recommendations

6.1 POLICY NEEDS RELATED TO FRAMEWORK AND RESEARCH

A major component of the Regional Freight System Planning Recommendations Study has been the development of policy-level improvements that would work hand-in-hand with the operational and infrastructure improvements in addressing the freight system needs of the Chicago region. The policy-level recommendations, which are listed in Table 6.1 of Section 6.2, were developed to address the system needs and deficiencies that have been identified through the stakeholder outreach (Section 4.0) and data analysis (Section 5.0) components of the project. In addition, in some instances, implementation of the policy recommendations will facilitate operational and infrastructure improvements. Many of these recommendations are based on best practices across the country that have been implemented to address similar freight system needs.

The proposed policies are targeted at addressing the vision of the region's freight stakeholders in terms of planning for freight mobility. While the cost of implementing the policy recommendations may be considerably low in comparison to their complementary operational and infrastructure improvement counterparts, the impacts are likely to be much broader. The timeframes for accomplishing the policy changes will vary significantly, with those requiring legislative action obviously requiring much more time to accomplish than the other types of policy recommendations.

Pending reauthorization of a new transportation bill will likely have an impact on policies at the Federal level that regulate freight mobility. The new bill's impacts could affect funding programs, as well as the planning and programming processes which guide transportation investments across the nation.

The paragraphs which follow summarize the policy related needs that were identified through the stakeholder outreach and data analysis components of the project. These needs are grouped within the Regional Freight Framework Themes that are discussed in Section 3.0, including Economy, Industry Logistics Patterns, Freight Infrastructure, Commodity/Vehicle Traffic Flows, Organization and Public Policy. While overlapping with the Organization and Public Policy Theme, a sixth category, Environmental and Community Impacts, was added to highlight the importance mitigating freight impact on the region is to CMAP.

Policy Needs: Economy

It is hard to deny that over the years the Chicago metropolitan area has established itself as a regional freight hub. With six of the nation's Class I railroads converging in the region, an extensive network of interstate highways supported by a complementary grid of arterial roadways, two major international airports and water access to the Great Lakes and the Mississippi River system, the region's freight hub status comes as no surprise. While the Chicago region is taking advantage of its freight hub status to attract and retain business and industry, the region's freight system must respond to the changing needs of these sectors as well as to the region's changing demographics. Currently a significant portion of the cargo movements within the region simply pass through, without having an origin or destination in the Chicago metropolitan area. These through trips, while contributing to the region's congested transportation network, do not bring economic benefits to the area. The region could more readily take advantage of its freight hub status by identifying and promoting value added industries that would enable the cargo movements to benefit the region's economy, instead of merely passing through on the extensive freight network.

Also of key importance to the region's freight related economic vitality is the availability of a logistics-skilled workforce. In order for the freight industry to prosper in the region, the labor force with interest in and the appropriate skills for logistics-related careers must be readily accessible. A major concern expressed by stakeholders was the lack of a trained workforce with these skills. This issue is common across several of the modes, including truck driver shortages (which occur more frequently during better economic times), as well as technically trained railroad employees. For the air cargo mode, which experienced a high turnover rate in recent years, the issue has recently been addressed through a training program for the air cargo workforce now offered by Chicago's City Colleges.

Policy Needs: Industry Logistics Patterns

While the Chicago region already serves as a national hub for goods movement, it is likely that this trend will continue and intensify in the future. It is important that the region is able to adapt to this expanded role. With the growing tonnages of cargo movements within the region, it is essential that logistics patterns are conducive to providing better freight services that are responsive to the needs of both the industry sectors and the communities which they serve.

In recent years, there has been widespread development of ancillary warehouse and distribution facilities in the Chicago region, likely due to growing containerized imports and the region's favorable linkages via rail and highway to the nation's seaports. This concept was discussed in an article in the <u>Journal of Real Estate Portfolio Management</u>. A major concern expressed by stakeholders is that much of this development is currently being pursued by individual municipalities in a somewhat ad hoc manner, with a lack of regional coordination. Opportunities exist for more focused planning at the regional level which could help minimize the cumulative impacts of these types of developments, resulting in benefits to shippers, haulers and quality of life in the adjacent neighborhoods.

The Chicago region has also experienced significant growth in intermodal activities in recent years with the development of a number of intermodal facilities, located primarily in the south and southwest suburbs. Most of these have been developed outside of the urban center on the fringes of the metropolitan area. While these fringe locations have allowed for expansion and the accompanying warehouse and distribution center development, they have resulted in increased drayage distances, a concern expressed by stakeholders who favored revitalization of the Cook County rail yards as opposed to the developments at the urban fringe.

Policy Needs: Freight Infrastructure

As the region's freight hub status continues to grow, it will be essential for its freight-supporting infrastructure to keep pace. While the region is well served by a comprehensive highway network that includes nine Interstate highways, most of these highways are operating under congested conditions during peak periods of the day, and most are carrying very high truck volumes. The resulting delay therefore not only affects passenger vehicles, but it also has a significant effect on commerce, which results when truck freight deliveries are delayed in traffic.

On the rail side, while the region is traversed by six of the nation's seven Class I Railroads, the region's rail network is plagued with numerous chokepoints which result in significant delays to both passenger and freight rail movements. While the region's CREATE program, when fully funded and implemented, will alleviate many of these chokepoints, additional improvements will still be necessary in order to ensure that the rail system can efficiently handle future projected rail volumes.

In regard to marine freight movements, while the Chicago region has marine access to both the Great Lakes and Mississippi River system, growth in the water freight industry is hindered by a number of infrastructure issues in the region. The most significant of these water freight infrastructure issues is related to

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¹ Impact of Shifting Container Cargo Flows on Regional Demand for U.S. Warehouse Space, <u>Journal of Real Estate Portfolio Management</u>, May-August 2005.

maintenance of the region's locks. The poor condition of these locks often results in significant delays in the movement of marine cargo through the region.

In addition to the infrastructure investments that are needed to maintain and increase capacity for the individual modes discussed above, investments are also needed to enhance the linkages between modes. In the Chicago region, these linkages are critical to the efficient movement of freight not only at the local level, but due to its hub status, at the national level, as well. In particular, stakeholders have identified the poor level of connectivity between rail lines and marine ports as a deterrent to intermodal shipments between these two modes. In addition, stakeholders also expressed concern about the lack of connectivity between air and highway modes at O'Hare International Airport due to a disconnect between the air cargo facilities on the west side of the airport and the major highway access on the east.

Policy Needs: Commodity/Vehicle Traffic Flows

Congestion is currently a significant cause of delay for both passenger and freight movements through the region, and this can only be expected to worsen in the future, as passengers compete with freight movements for capacity on the region's highways and railroads. On the highways, congestion may be of a recurring nature (resulting from traffic volumes exceeding capacity) or of a non-recurring nature (resulting from incidents, construction or other isolated events). On the rail lines, the delays most frequently result from conflicts between passenger and freight trains or grade crossing conflicts (at both rail to rail and highway to rail grade crossings). In particular, stakeholders expressed concern regarding rail delays entering intermodal facilities and yards, which frequently result in highway delays when grade crossings are blocked by trains waiting to enter these facilities.

From a motorist perspective, these delays result in increased travel time, lost productivity, and general frustration. From a freight mobility perspective, in addition to the impacts faced by motorists, these delays are also a significant hindrance to on-time deliveries. With increasing emphasis on just-in-time deliveries, it is difficult for haulers to predict delivery times when traveling on the area's congested roadways.

Stakeholders recommended a variety of strategies that would help alleviate the impacts of the region's congested roadways for both motorists and freight movements. In particular, an expanded advance traveler information system reporting area delays would enable routing decisions to be modified well in advance of reaching a potential bottleneck. Stakeholders also suggested the implementation of both congestion management strategies and travel demand management strategies as a means of reducing congestion and improving freight operations.

Policy Needs: Organization & Public Policy

Encompassing an area of 4,071 square miles, the Chicago Metropolitan Area is diverse in nature, with the City of Chicago as its urban core and including seven counties and 283 municipalities. While this area is large and diverse, it is necessary for the region's freight stakeholders to speak with a unified voice and plan for the good of the region. The Chicago Metropolitan Agency for Planning (CMAP) has recently established a Freight Committee which is a step toward accomplishing a regional Freight Vision. This committee brings together the region's freight stakeholders from the public and private sectors to discuss issues related to freight movement by all modes within the region and to make recommendations to CMAP's Policy Committee. In taking the regional planning and coordination responsibility a step further, stakeholders have suggested the possible establishment of regional Port Authority to coordinate freight-related investments and community impacts, in conjunction with developing and supporting a regional freight policy. Among the charges of such a governance body would be addressing potential funding sources for freight-related improvements, such as fuel taxes, tolling or public-private partnerships. addition, stakeholders expressed a desire for a better method of measuring performance of proposed freight projects in order to have more consideration of freight factors in the planning process.

During the stakeholder interview process, a number of cross-jurisdictional issues surfaced. One of those issues discussed in the past involves municipal delivery time restrictions which limit the time of day when truck deliveries are allowed in certain areas, prohibiting deliveries during the nighttime and early morning hours. This restriction forces deliveries to a number of locations (particularly grocery stores and other retail establishments) to the morning rush hour, in order to restock their shelves before the peak shopping hours begin. Due to a lack of truck parking close to these delivery locations, truck drivers are required to be on the highway during peak commuting periods, contributing to and being impacted by congestion, and in some cases (on the Tollway) paying higher tolls. There are also safety implications when truck deliveries are being made during the time period when school children are walking to school.

In conjunction with the delivery time restriction issue mentioned above is the region's truck parking deficit. Parking around delivery locations is limited, leading to the congestion and safety issues mentioned above. With the new regulations that limit hours of service that commercial drivers are allowed to operate their vehicles, drivers are often forced to park in unsafe locations, such as along highway shoulders and ramps, in order to avoid driving while fatigued. Areas in particular need of truck parking are located around intermodal facilities, where truckers need a place to do paperwork, or layover prior to entering the facility. There is also a need for amenities at the truck parking areas, such as electrical hookups to avoid idling engines, which result in environmental impacts (noise and air quality) to adjacent neighborhoods.

Trucking industry stakeholders also mentioned their concerns for truck lane restrictions on many of the region's highways, specifically the express lanes on the Dan Ryan Expressway, as well as differential speed limits for trucks on many roadways. In addition, they feel that construction zones could be better managed by limiting lane restrictions to periods when work is actually being done. And, finally, the inconsistencies in weight restrictions between states and in some cases between various adjoining communities result in circuitous routing for truck drivers. The trucking industry also expressed concern over the excessive (more than one jurisdiction) overweight permits.

On the rail side, stakeholders see a strong need for regional support of the CREATE program since this addresses many of the major rail bottlenecks and capacity constraints in the region.

Policy Needs: Environmental & Community Impacts

While the freight industry continues to grow in the Chicago region, it is becoming more and more important to plan proactively to minimize potential conflicts between freight-oriented development and the quality of life within the communities. By addressing potential issues through proactive and comprehensive planning at the regional level, such community concerns as conflicting land uses and environmental impacts can be minimized. Public and private stakeholders should be a part of the region's freight-planning process in order to ensure that all voices are heard.

As the region's intermodal facilities continue to develop and expand, stakeholders have identified a need for more coordinated planning efforts to address potential impacts not only within the communities where these facilities are located, but more importantly to the surrounding communities, as well. Concerns were raised regarding increased wear and tear on the roadways serving the intermodal facilities, due to the increased heavy truck traffic, as well as congestion issues from the increased volumes of traffic. In addition, trains awaiting entrance into these facilities often block at-grade crossings, tying up traffic and hindering access by emergency response vehicles.

With the heavy volumes of train traffic in the region, communities have expressed concern regarding noise, the dangers of hazardous materials being transported through their neighborhoods, and grade-crossing safety, as well as conflicts with commuter trains. A particular concern has been raised due to the increased train volumes on the CN following acquisition of the EJ&E. While the noise issue can be addressed through the implementation of "quiet zones", the required safety mitigation to compensate for the absence of train whistles is often an expense that is difficult for the municipalities to bear.

The noise concern expressed by stakeholders was not limited to train noise. The communities surrounding O'Hare International Airport also expressed noise

concerns related to air cargo flights, since most of these flights occur during the nighttime hours.

6.2 METHODOLOGY FOR SELECTION

The list of policy options that have been developed for this study are grouped within the study's six "Regional Freight Framework Themes": Economy; Industry and Logistics Patterns; Freight Infrastructure; Commodity and Vehicle Traffic Flows; Organization and Public Policy; and Environmental and Community Impacts, based on the needs which each would address. It should be noted that while many of the policy options could easily fit into more than one of these themes, to avoid redundancy, only the one with the apparent strongest match was identified.

The policy options shown in Table 6.1 were evaluated in accordance with a set of performance measures which included the following: Accessibility, Economic Development, Mobility, Safety, and Environment/Community. recommended policy was evaluated on its ability to address each of these The results of this exercise were then presented to the Freight Committee. In an exercise at the Freight Committee meeting on 11/16/09, members and other stakeholders in attendance were asked to prioritize the policy recommendations on a scale of low, medium, or high priority. During the same exercise, participants were asked to phase the recommendations (short-, mid-, and long-term), based on the most optimistic timeframe in which it could be implemented. Finally, the participants were charged with identifying a recommended lead agency who would serve as the "champion" in overseeing its implementation. It should be emphasized, however, that most of the policy options will require the collaborative work of numerous agencies and stakeholders seeing them through to fruition. The results of this exercise are shown in Section 6.3 which discusses each of the individual policy recommendations.

Table 6.1 Policy Recommendations by Theme

Ref	Policy Recommendation	Pg. No.
Polic	ry Theme Bundle: Economy	6-9
1	Through partner agencies, implement projects and operations strategies that address the freight infrastructure and operations needs and deficiencies for growing and strong industries in metropolitan Chicago to facilitate industrial retention and expansion	6-9
2	Identify and promote value added industries and opportunities that could benefit from the region's freight hub status	6-10
3	Identify and promote existing logistics related training & education opportunities and encourage additional programs, as appropriate for developing and sustaining logistics related workforce	6-10
Polic	ry Theme Bundle: Industry Logistics Patterns	6-11
4	Identify, assess and implement freight corridors & facilities of regional significance, including clustering of warehousing, distribution and other freight-related centers, based on freight O-D patterns	6-11
5	Identify, assess and implement opportunities for corridor preservation	6-12
6	Identify and promote good practices to facilitate freight movements and mitigate impacts in a variety of land use and development environments	6-13
Polic	ry Theme Bundle: Freight Infrastructure	6-14
7	Identify opportunities for dedicated freight corridor systems (truckways, truck-only lanes, dedicated NHS connectors, Illiana Expressway, rail linkages)	6-14
8	Identify investment options in alternative modes and intermodal facilities to encourage diversion from congested highway freight corridors	6-15
9	As CREATE Program implementation moves toward completion, work toward a CREATE II program based on the vision of continuing to enhance the main-line rail system so that it has the capacity to efficiently handle potential future traffic loads and meshes with an efficient system for local pick-up and delivery	6-16
Polic	ry Theme Bundle: Commodity / Vehicle Traffic Flows	6-17
10	Reduce empty container moves	6-17
11	Manage the travel demand of passenger vehicles to facilitate freight movements, as well as incorporating designs that are conducive to more efficient freight and passenger movements (traffic management)	6-17
12	Identify opportunities for reducing tractor (bobtail) and chassis vehicle miles traveled per container move	6-18
Policy Theme Bundle: Organization and Public Policy		
13	Establish CREATE counterpart for trucking industry ("CREATE for Trucks")which could include policy options to enhance the movement of cargo by truck	6-19
14	Establish governance structure, such as a Port Authority, to identify issues, guide investments and advocate on behalf of the region through public outreach and education, promoting the Chicago economy and protecting the public interest	6-20
15	Promote the Chicago region as a development center for freight tracking and	6-21

	freight data-sharing technologies, encourage private sector innovation	
16	Include freight-related performance measures in project evaluation process to ensure the consideration of freight enhancing projects in the programming process	6-22
17	Adopt innovative strategies to better match new and available funds with freight system needs	6-23
18	Implement the CREATE Program	6-27
Polic	ry Theme Bundle: Environmental and Community Impacts	6-28
19	Promote lower-emission freight modes and technologies (e.g. GenSet locomotives)	6-28
20	Identify and implement design features to control freight-related noise	6-29
21	Develop process for identifying development opportunities, brownfield re-use	6-30
22	Support City of Chicago industrial corridor designations of Planned Manufacturing Districts	6-30
23	Promote safety programs such as "Operation Lifesaver" and "No Zone"	6-31
24	Address the higher wear and tear on freight-impacted road surfaces with increased maintenance efforts	6-32
25	Improve both rail and truck access into intermodal facilities to reduce community impacts	6-33
26	Accommodate freight in ways conducive to intermodal passenger transportation, such as pedestrian, bicycle, passenger vehicle, commuter rail, and inter-city passenger rail, including crossings and shared-use corridors	6-34

6.3 POLICY BUNDLES

Regional Framework Theme: Economy

Policy Recommendation #1

Through partner agencies, implement projects and operations strategies that address the freight infrastructure and operations needs and deficiencies for growing and strong industries in metropolitan Chicago to facilitate industrial retention and expansion.

The goal of this recommendation is to foster economic growth in the metropolitan area through the retention and expansion of existing freight-dependent industries by addressing their transportation, logistics and distribution needs. This will be done by taking advantage of the region's existing transportation systems and expanding and/or enhancing them to address the needs of these industries.

Priority: High

• Timeframe: Short-term

- Implementing Agency: CMAP (Facilitator for all partner agencies)
- Action Items:
 - Work with EDCs and CMAP Freight Committee to identify and monitor on an ongoing basis specific infrastructure and operational needs of the region's freight dependent industries.
 - Incorporate the freight-related needs of existing industries into the project identification and selection process.

Policy Recommendation #2

Identify and promote value added industries and opportunities that could benefit from the region's freight hub status.

Currently, a significant portion of the region's freight tonnage is pass-through traffic, either passing through without stopping, or simply being transferred between carriers or modes. In order to enhance the region's economic benefits from its extensive freight network, the goal of this recommendation is to market the region to potential businesses and industries that could take advantage of and prosper from Chicago's freight hub status through value added activities, such as assembly and processing.

Priority: Low

Timeframe: Short-term

- Implementing Agency: EDCs, Federal Transportation Bill
- Action Items:
 - Market the Chicago region through increased advertising in trade journals, attending trade shows and networking opportunities.
 - Establish a regional "Marketing Consortium" consisting of representatives of local, state, regional and private sector representatives to identify opportunities and visit prospective businesses and industries.

Policy Recommendation #3

Identify and promote existing logistics related training & education opportunities and encourage additional programs, as appropriate for developing and sustaining logistics related workforce.

In order to sustain the freight-related businesses and industries that currently exist in the region, while encouraging new ones to locate within the region, it is essential that employers have access to a large pool of potential employees who have an interest in these types of careers. At the same time it is important for these employees to be appropriately trained in the skills required for freight-industry jobs. For example, the shortage of truck drivers has been consistently

ranked by the American Transportation Research Institute as one of the top ten issues for that industry. In addition, stakeholders have expressed a concern regarding the shortage of technically trained railroad employees. With the anticipated growth in both of the modes, the need for skilled employees can be expected to increase in the near future.

• Priority: High

• Timeframe: Short-term

• Implementing Agencies: State, University/IDOT link, tradeshow, Federal Transportation Bill

Action Items:

- Colleges and Universities should work together with freight-related industries (railroads, trucking, air cargo, and marine freight industries) to match training needs to existing educational programs, identifying gaps that exist, and develop training programs to fill these gaps.
- Freight industries should market freight-related careers by sponsoring activities at high school and college career fairs and other recruiting events. Establish a Speakers' Bureau to provide presentations at these activities.
- Take advantage of existing freight-related training programs offered by Federal Highway Administration, National Highway Institute, National Cooperative Highway Research Program, National Cooperative Freight Research Program and Transportation Research Board.

Regional Framework Theme: Industry Logistics Patterns

Policy Recommendation #4

Identify, assess and implement freight corridors & facilities of regional significance, including clustering of warehousing, distribution and other freight-related centers, based on freight O-D patterns.

There are numerous advantages of clustering freight corridors and facilities, to both the public and private sectors, including shippers, haulers, freight-dependent industries, and communities. The Center for Neighborhood Technology (CNT) has done significant research on this concept, known as cargo-oriented development. From an industry perspective, there are benefits of scale and proximity, such as the advantages of having similar freight-dependent businesses close by, having access to multiple freight modes, and having access

to a large labor pool.² On the public sector side, the CNT has identified such benefits as maximizing freight movements by train (less polluting and more energy-efficient), reducing the length of intraregional truck movements, reducing congestion and air pollution, and helping target investment and job growth to those communities with an available skilled labor force.³ Toward this goal of clustering freight-related developments, the South Suburban Mayors & Managers Association (SSMMA) and the Chicago Southland Economic Development Corporation (CSEDC) have identified and are currently promoting the I-80 East Logistics Corridor which traverses southern Cook and northern Will Counties between I-55 and the Illinois/Indiana State Line.

Priority: High

• Timeframe: Short, Mid and Long-term

• Implementing Agencies: Port Authority, Local EDCs, MMAs

Action Items:

- Continue to promote the I-80 East Logistics Corridor as a key regional logistics corridor.
- Expand and implement the CNT cargo-oriented development tool to identify and promote other potential logistics corridors for development in the Chicago region.

Policy Recommendation #5

Identify, assess and implement opportunities for corridor preservation.

The State of Illinois currently has in place a Corridor Protection Statute which may be utilized as a means of preventing the further development of parcels within an identified right-of-way for a transportation improvement. The statute requires property owners to notify the DOT of any improvements to land or structures and give the DOT an opportunity to purchase or acquire the land. The Corridor Protection Statute is a powerful tool for preserving threatened right-of-way for a project until a point in time when construction is ready to commence and project funding has been secured.

Priority: High

• Timeframe: Short to Mid-term

Implementing Agencies: CMAP, IDOT

² Center for Neighborhood Technology. *Cargo-Oriented Development: A Tool for Freight Planning in the Chicago Metro Area.* 2005.

³ Center for Neighborhood Technology.

Action Items:

Take advantage of the State of Illinois' Corridor Protection Statute to preserve rights-of-way for projects that are identified to have significant future freight-related benefits and for which the project's development has progressed to a point where the right-of-way needs have been identified. For example, begin to identify and preserve right-of-way to provide a by-pass route south of the City of Chicago that could be used for traffic moving through the region.

Policy Recommendation #6

Identify and promote good practices to facilitate freight movements and mitigate impacts in a variety of land use and development environments.

As freight-related industries continue to develop in various portions of the region, it is essential that potential land use conflicts be minimized. development of commercial and industrial land uses (which are generally freight dependent) is usually accompanied by a need for related industries such as terminals, repair facilities and warehousing /storage locations. But as these types of land uses continue to grow in a particular area, there is often a conflict with existing residential communities, particularly related to noise, truck traffic, safety, aesthetics, and other quality of life issues. In order to minimize and mitigate these potential impacts, it is important to plan proactively at the local and regional levels through cross-jurisdictional land-use planning and coordination, as well as developing partnerships between the public and private sectors. An example of existing efforts toward this goal in the region is the Will County Model Ordinance Regulating the Location and Use of Cargo Container Facilities for Governmental Units within Will County. This model ordinance was prepared as a best practices guideline for jurisdictions within Will County for ensuring compatibility between cargo container facilities, related developments and other land uses within the county to minimize potential negative impacts.

CMAP currently has in place a process for identifying and reviewing Developments of Regional Importance (DRI) which was enabled by the Illinois General Assembly, Public Act 095-0677. The process is in place for a two year trial period when ends on July 31, 2011. The purpose of the DRI initiative is to foster regional coordination in planning for and implementing large-scale developments with the potential to create both benefits and impacts at the regional level. The review process is focused on ensuring that these developments occur in a manner that is consistent with regional goals.

• Priority: High

• Timeframe: Short to Mid-term

• Implementing Agencies: CMAP, IDOT, Municipalities

Action Items:

- Encourage involvement and support by local jurisdictions of the CMAP process for identifying and reviewing freight-related Developments of Regional Importance (DRI). The DRI review process establishes a framework for reviewing proposed large-scale developments from a regional perspective, providing an opportunity for coordination among jurisdictions to assess the impacts on regional goals.
- Using the Will County Model Ordinance as an example, work through Mayors & Managers Associations and Councils of Government to develop similar ordinances to encourage the incorporation of freightrelated impact mitigation measures into land use plans.
- Encourage multi-jurisdictional coordination and review process for development and expansion of proposed intermodal facilities, to ensure that benefits and impacts are addressed from a regional perspective.

Regional Framework Theme: Freight Infrastructure

Policy Recommendation #7

Identify opportunities for dedicated freight corridor systems (truckways, truck-only lanes, dedicated NHS connectors, Illiana Expressway, rail linkages).

This policy recommendation focuses on providing freight-dedicated facilities in the region, resulting in the separation of freight and passenger movements. A number of potential dedicated facilities have been studied in the past, including the Mid-City Freightway and dedicated truck-only lanes on the proposed Illiana Expressway. Advantages of these separated facilities would include safety enhancements through separating large trucks and passenger vehicles, efficiency in moving cargo by avoiding certain corridors that are congested due to peak hour passenger vehicle congestion, and maintenance considerations which would allow the specific infrastructure enhancements (such as pavement design, geometrics, sight distance and land widths) that are required for large trucks to be focused on these dedicated facilities. In addressing the dedicated freight facilities, it will be important to garner support from local agencies in localities where arterials join one of the designated facilities in order to address potential impacts to both local infrastructure and quality of life.

A specific area for potential dedicated freight corridors would be the linkages between the region's intermodal facilities. Truck route connections on rail or public property between these facilities would facilitate drayage movements while limiting increased truck traffic on local streets.

In addition to the dedicated truck facilities that have been mentioned, the region could also benefit from direct rail linkages between railroad lines to facilitate connections between eastern, western, Canadian and short-line carriers within the Chicago region, thus alleviating the need for rubber-tire transfers of cargo between rail lines.

Priority: High

- Timeframe: Short-term
- Implementing Agencies: CDOT, IDOT, FHWA, ISTHA with involvement from railroads/FRA, counties, and local supporting agencies, especially where local arterials meet the facility

• Action Items:

- Identify opportunities to incorporate dedicated freight components into ongoing corridor studies, such as the Illiana Expressway, Mid-City Freightway and other future studies.
- Promote better coordination among rail carriers by creating truck routes on rail or public property that would be used for drayage between neighboring intermodal terminals so as to limit such movements on local streets.
- Begin a dialogue between railroads, local and regional agencies and private entities to identify potential opportunities for rail linkages between carriers.

Policy Recommendation #8

Identify investment options in alternative modes and intermodal facilities to encourage diversion from congested highway freight corridors.

As the volume of cargo increases both at the national and regional level, an increased burden will be placed on freight-carrying infrastructure across all modes. In fact, freight tonnages are expected to nearly double in the United States between 2004 and 2035, which will certainly be felt in the Chicago region due to its hub location. A recent study for the Association of American Railroads has indicated that in order for the nation's Class I Railroads to maintain their market share while operating at current service levels over the next 30 years, an investment of over \$148 billion in existing infrastructure will be required. Any growth that cannot be handled by the railroads or other non-highway modes will fall upon the roadways, where trucks are already competing with passenger vehicles for limited capacity. This policy recommendation is targeted at diverting freight movements from the congested roadways through investments in alternative modes and intermodal facilities.

Priority: Medium

• Timeframe: Long-term

- Implementing Agencies: Port Authority, or City/ State/ Maritime/ AAR/ Airport Authority
- Action Items:
 - Identify potential opportunities for diversion of truck cargo to rail, water and air modes.

 In conjunction with opportunities for diversion to non-highway modes, identify required infrastructure investments for increasing capacity on these modes and potential funding sources.

Policy Recommendation #9

As CREATE Program implementation moves toward completion, work toward a CREATE II program based on the vision of continuing to enhance the main-line rail system so that it has the capacity to efficiently handle potential future traffic loads and meshes with an efficient system for local pick-up and delivery.

The Chicago Region Environmental and Transportation Efficiency Program (CREATE), when completed, will make significant progress toward increasing the efficiency of the freight rail system in the Chicago region, relieving numerous conflicts between freight and commuter rail (resulting in significant time savings for the region's commuters), and improving the quality of life for those who live and work in the metropolitan area. CREATE II would take advantage of the existing framework that has been established for CREATE in continuing to identify and implement rail system improvements to ensure that the efficiency of the rail system continues to improve while carrying the increased cargo tonnages that are projected for the future.

Priority: Medium

• Timeframe: Mid to Long-term

• Implementing Agencies: CDOT, IDOT, Railroads

Action Items:

- Bring all major mainline routes traversing the Chicago region up to higher operating standards in order to improve operating speeds, including: multi-tracking lines, eliminating clearance or axle load restrictions (on the lines or the bridges); limiting grade-crossings; enhancing easy, unrestricted access to the region's major terminals; and ensuring sufficient siding tracks and buffer storage facilities to allow trains to move off the mainline with minimal disruption to highway traffic or to other rail traffic in the event of rail congestion, accidents, severe weather, or other conditions that prevent trains from entering terminals.
- Increase terminal capacity: maintain sufficient terminal capacity to handle potential increases in traffic volume, including sufficient facilities for traffic originating or terminating in the region as well as sufficient facilities for traffic that must be classified or interchanged as it moves through the region.
- Expand use of information technology to better coordinate movements through the region.

- Reduce road user delay at highway-rail grade crossings, through separations (in addition to CREATE projects), if necessary.

Regional Framework Theme: Commodity/Vehicle Traffic Flows

Policy Recommendation #10

Reduce empty container moves.

The current imbalance in containerized imports vs. exports (particularly from Asia) has resulted in an abundance of empty containers being backhauled from the US to foreign ports. (Stakeholders representing the shipping industry have estimated that less than five percent of backhauls are loaded.) This policy recommendation focuses on identifying ways to balance inbound and outbound container movements within the Chicago region, which in turn will have an impact at the national level.

- Priority: Low
- Timeframe: Long-term
- Implementing Agencies: Federal Transportation Bill, private railroads, EDCs
- Action Items:
 - Identify locations in the region where outbound empty container moves are occurring.
 - Facilitate collaboration between shippers and logistics providers to minimize empty container moves by coordinating needs and better utilizing empty container capacity.
 - Establish regional database for tracking empty container locations and availability.

Policy Recommendation #11

Manage the travel demand of passenger vehicles to facilitate freight movements, as well as incorporating designs that are conducive to more efficient freight and passenger movements (traffic management).

With the volumes of both passenger vehicles and freight carriers on the region's highways projected to grow significantly in the future, there will be increased competition between trucks and cars for limited capacity on the region's highways. With cargo tonnages expected to nearly double across the nation in the next 30 years, even if each mode continues to maintain its current market share, our highways will be carrying twice as much cargo tonnage by the year 2040 as they are today, thus doubling the number of freight-hauling trucks on the region's roadways. And if any of the other modes are unable to maintain their market share, the excess burden will likely fall onto the highway mode,

increasing the number of freight-hauling trucks even more. The focus of this policy recommendation is to begin identifying options for managing the demand of passenger vehicles, in addition to identifying a more efficient means of managing the shared use of the roadways by trucks and autos.

Priority: High

• Timeframe: Mid to Long-term

Implementing Agencies: CMAP, IDOT

Action Items:

- Reduce passenger vehicle demand by promoting the use of transit and carpooling throughout the region.
- Identify potential roadways in the Chicago region where truck only lanes could be considered, both as an enhancement to existing roadways and for new roadways, such as the Illiana Expressway. Explore the feasibility of implementing this option.
- Explore the feasibility of implementing congestion pricing strategies to reduce the peak hour demand by passenger vehicles. (Because many delivery vehicles are on the roadways during peak hours, they often compete with peak hour commuting traffic for capacity on the roadways.)
- Promote ITS strategies to provide real-time traveler information as a means of encouraging and facilitating diversion to alternate routes during congested periods, or during non-recurring incidents.

Policy Recommendation #12

Identify opportunities for reducing tractor (bobtail) and chassis vehicle miles traveled per container move.

In addition to being inefficient, the movement of single tractors (bobtails) and chassis without having loaded trailers attached is also more difficult from a commercial driver's perspective. Bobtail movements result when a trailer is delivered (or is transferred to another mode) and another one is not available for pick-up from the same location. This policy recommendation is focused on identifying a means of balancing trailer deliveries with pick-ups in order to avoid having a tractor or chassis dead-head without a trailer to another facility.

• Priority: Low

Timeframe: Long-term

• Implementing Agencies: Federal Transportation Bill, EDCs

Action Items:

- Facilitate collaboration between shippers and trucking companies to minimize bobtail movements by coordinating trailer pick-ups and deliveries in order to more efficiently utilize tractor and chassis capacity.
- Establish regional database for matching container pick-ups and deliveries.

Regional Framework Theme: Organization and Public Policy

Policy Recommendation #13

Establish CREATE counterpart for trucking industry ("CREATE for Trucks") which could include policy options to enhance the movement of cargo by truck.

The Chicago Region Environmental and Transportation Efficiency Program (CREATE) is a public-private partnership between the railroads and numerous public agencies, established with the goal of increasing the efficiency of the region's freight and commuter railroads, reducing conflicts between them, while at the same time improving the quality of life within the Chicago region. The goal of this policy recommendation is to create a similar program for the trucking industry, to be known as "CREATE for Trucks". This new entity would use the example of the existing CREATE program, bringing together public and private sector stakeholders to identify operational and capacity improvements that would benefit the trucking industry and reduce conflicts between passenger and cargo vehicles. Like its rail counterpart, "CREATE for Trucks" would benefit not only local commerce, but would also have a positive impact on commerce at the national level by helping to alleviate bottlenecks on the region's highway network. In addition, community benefits would include reduced congestion on the area's roadways, safety benefits, emissions reductions, and more efficient deliveries to local suppliers. Also following the model of its rail counterpart, "CREATE for Trucks" could benefit through public-private funding partnerships. The Chicago Skyway is an example of a public-private partnership for a highway project through which the City of Chicago entered into a longterm lease agreement with a private consortium for operating and maintaining this 7.8-mile toll facility connecting the City of Chicago to the Indiana Toll Road.

• Priority: High

• Timeframe: Short-term

- Implementing Agencies: Similar format to CREATE, with PPPs among city, state, trucking association, etc.
- Action Items:
 - Establish regional transportation operations coalition with freight system participation.
 - Identify potential locations and funding sources for expanded truck parking/rest areas with appropriate amenities to enable compatibility with surrounding land uses. An initial task for this action item might

include a study to determine where current truck parking deficiencies exist in the region.

- Manage truck delivery times for regional efficiency.
- Establish centralized CBD freight distribution nodes to limit the number and size of delivery trucks within the CBD.
- Explore changes to TS&W limits, allowing higher productivity vehicles on Illinois highways, weighing economics & safety.
- Expand and enhance the truck route system in the metro area, integrating other aspects of "CREATE for Trucks" to optimize the system.
- Develop a broadly available freight planning geodatabase for use by public and private stakeholders to identify regional freight system needs and to coordinate action through information sharing and mutual cooperation. The planning geodatabase would include such items as local and state truck routes, clearance issues, weight restrictions, traffic generators, congestion, parking, and rest areas.
- Develop and apply Intelligent Transportation Systems infrastructure on freight system facilities to improve system performance and improve freight handling efficiency.
- Review the necessity and utility of truck lane restrictions; implement modifications, as appropriate.

Policy Recommendation #14

Establish governance structure, such as a Port Authority, to identify issues, guide investments and advocate on behalf of the region through public outreach and education, promoting the Chicago economy and protecting the public interest.

The governance structure proposed in this policy recommendation would serve as an oversight agency for coordinating freight issues and investments in the Chicago region, bringing together the public and private sectors, working together toward accomplishing goals of mutual interest and benefit to the region. In its oversight capacity, the proposed body would have the authority to collect revenue (such as user fees or tolls) and issue bonds. Board members of the proposed agency would be appointed by elected officials, including the Governor, County Board Chairmen and the Mayor of the City of Chicago. The agency's oversight responsibilities would include all freight modes, as well as freight-related economic development opportunities within the region.

- Priority: Low
- Timeframe: Short to Mid-term
- Implementing Agencies: CMAP (facilitator for all partner agencies)

• Action Items:

- Explore legislative requirements for creating a regional freight governance structure, such as a Port Authority for the Chicago region.
- Define responsibilities of the governance structure.
- Identify board member representation.
- Form a committee to work with legislators to garner support for creating the regional Port Authority, providing assistance with drafting proposed legislation.

Policy Recommendation #15

Promote the Chicago region as a development center for freight tracking and freight data-sharing technologies, encourage private sector innovation.

The Chicago region's national freight hub status brings with it opportunities for collecting and sharing freight-related data, which can then be used to market the region to industry, developers and freight providers. A number of activities have already been initiated toward accomplishing this recommendation, including the Center for Neighborhood Technology's Cargo-Oriented Development Tool⁴ (see Policy Recommendation #4) which is currently under development to facilitate the clustering of freight-dependent industries within easy access to a variety of freight transportation options and within close proximity to related businesses and an available workforce. In addition, CMAP's Full Circle Mapping Program promotes data collection, technology and mapping by the region's planning partners so that this information can be shared and exchanged throughout the region.

• Priority: Low

• Timeframe: Short-term

• Implementing Agencies: CMAP, IDOT, CDOT, Trucking Industry, Port Authority

• Action Items:

- Promote CMAP's Full Circle Program to additional regional planning partners, to be used for compiling freight-related data that can be used to market the region's freight assets.
- Support the use and expansion of the Center for Neighborhood Technology's Cargo-Oriented Development Tool for identifying potential industrial sites within the region.

⁴ Center for Neighborhood Technology.

Develop a broadly available freight planning geodatabase for use by public and private stakeholders to identify regional freight system needs and to coordinate action through information sharing and mutual cooperation. The planning geodatabase would include such items as local and state truck routes, clearance issues, weight restrictions, traffic generators, congestion, parking, and rest areas. (See Policy Recommendation #13)

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Policy Recommendation #16

Include freight-related performance measures in project evaluation process to ensure the consideration of freight enhancing projects in the programming process.

Most transportation agencies have more transportation needs than funding, therefore, they must make tough decisions regarding which projects to fund. While CMAP is currently in the process of enhancing their prioritization methodology for evaluating projects to be included in their updated long-range plan, this policy recommendation suggests the inclusion of measures that take into account freight-related benefits to identify freight needs and deficiencies. This performance-based approach is consistent with a national trend among transportation agencies working to implement a more transparent and quantitative means of project evaluation, and instill more accountability into the project selection process. It combines benefit/cost analysis with an assessment of how well each potential project supports stated policy goals and objectives. The intent of this approach is NOT to create a purely mechanical system, devoid of public input and policy decisions. Rather it is intended to support and integrate with planning and policy decisions.

The methodology for performance-based planning is organized around four building blocks of project prioritization:

- 1. Evaluation criteria Develop a series of criteria that will be used to evaluate projects.
- 2. Weights Assign weights to the criteria.
- 3. Benefit/cost Consider benefit/cost ratio (B/C) as a stand-alone metric, separate from the criteria described above.
- 4. Results Develop an approach for combing the criteria, weights, and b/c analysis described above and communicating the results in a manner that enables decision makers to incorporate them into their decision-making process.
- Priority: High
- Timeframe: Short-term
- Implementing Agencies: CMAP, IDOT/ISTHA

• Action Items:

- Identify performance measures that relate to existing freight-related regional goals and objectives.
- Use performance measures to identify freight needs and deficiencies.
- Incorporate freight-related performance measures into project evaluation process for short- and long-range plan development.

Policy Recommendation #17

Adopt innovative strategies to better match new and available funds with freight system needs.

Essential to the planning and implementation of the freight-related projects and strategies identified herein is the identification of applicable funding and financing sources for the improvements. The funding and financing programs identified on the following pages are categorized into six areas including: 1) Federal Formula Highway Programs; 2) Special US DOT Funding Programs; 3) Special Non-DOT Funding Programs; 4) Other Funding Options; and 5) Special Financing Programs. Within each of these categories a number of funding and/or financing options are listed, along with a brief description of each. Earmark programs have not been included in this list, since commitments beyond 2009 are not known at this time.

• Priority: Medium

• Timeframe: Short-term

• Implementing Agency: CMAP

Action Items:

 On a case-by-case basis, match freight project needs with above funding options and others that may become available through upcoming new Federal Transportation Bill.

Table 6.2 Federal Formula Highway Programs

Federal Formula Highway Programs	Features
Interstate Maintenance (IM)	Resurfacing, restoring, rehabilitating and reconstruction (4R) projects
	Freight-specific projects not eligible, but improvements may enhance freight mobility
	Eligibility includes Interstate Highways
National Highway System (NHS)	Construction, reconstruction, resurfacing, rehabilitation on NHS facilities or connectors between the NHS and freight- related facilities
	Eligibility includes Interstate Highways, other principal arterials, Strategic Highway Network (StraHNet), major strategic highway connectors between military installations and StraHNet, intermodal connectors
Surface Transportation Program (STP)	Roadway projects
	Bridge projects
	Transit capital projects
	Rail projects that enhance grade crossing safety
	Eligibility includes Federal-aid highways, bridges on public roads, transit capital investments, bus terminals & facilities (intracity and intercity)

Table 6.3 Special DOT Funding Programs

Special DOT Funding Programs	Features
Congestion Mitigation and Air Quality (CMAQ)	Projects that improve air quality in non-attainment and maintenance areas
	Eligibility includes intermodal facilities, barge operations, rail track rehabilitation, rail sidings, emission reduction, congestion mitigation activities, truck stop electrification
Highway Bridge Program	Replacement, rehabilitation and systematic preventive maintenance of bridges
	Eligibility includes Federal-aid highway bridges and off- system highway bridges
Railroad Grade Crossing Program	Hazard elimination at highway-rail at-grade crossings
	Installation or upgrade of protective devices at highway-rail at-grade crossings
	50% of funding allocation must provide for installation of protective devices at at-grade crossings
	Includes grade separations, reconstruction of grade crossings, and elimination of grade crossings
Truck Parking Facilities	New or expanded commercial vehicle parking facilities
	Eligibility includes commercial vehicle parking facilities, turnouts, improved access to commercial vehicle parking

	facilities and truck parking electrification systems
FTA Fixed Guideway Modernization Program	Fixed guideway system improvements for transit and commuter rail projects
	Although not directly freight-eligible, passenger rail improvements could result in freight rail benefits
	Eligibility includes passenger rail systems that have been in place for at least 7 years
Rail Line Relocation Program	Rail line relocation and improvement projects that result in safety and other community benefits
	At least half of funds for projects of \$20 Million or less
	Program subject to annual appropriation
	At-grade rail crossing safety enhancements are eligible
FAA Airport Improvement Program	Airport planning and development projects that focus on safety, capacity, security, and the environment
	Airports must be included in National Plan of Integrated Airport Systems
	Cargo airports must receive 100 million pounds of cargo annually
	Private airports must have more than 10,000 annual enplanements
American Recovery & Reinvestment Act (ARRA)	Transportation infrastructure improvements
	Funds apportioned to states by formula
	No state match required
	Obligation deadlines must be met

Table 6.4 Non-DOT Special Funding Programs

Non-DOT Special Funding Programs	Features
USACE Harbor Maintenance Trust Fund	Operations and maintenance dredging of channels for commercial navigation
	Ports must be located along Federally authorized navigation channels
U.S. Department of Commerce - Economic Development Administration Funds	Targeted at promoting job creation or retention through projects in economically distressed industrial sites
	Eligibility includes EDA-designated redevelopment areas or economic development centers
	Requires proof of economic distress
Environmental Protection Agency – Brownfield Revitalization Program	Projects focused on promoting brownfield site cleanup and redevelopment
	Eligibility includes local governments, development agencies and nonprofit groups

Table 6.5 Additional Funding Options

Additional Funding Options	Features
Tolls	Could be used for specialized toll facilities, such as bridges, tunnels, turnpike facilities, etc.
	 From a freight perspective, could be used for truck-only-toll (TOT) lanes on congested truck routes
	Revenue from tolls on freight-related facilities could be used for operating and maintaining the facilities, with excess being used for additional freight improvements
Congestion Pricing	Based on a variable toll structure which provides incentives for traveling during off-peak or uncongested hours
	 Toll rates may vary based on a fixed schedule, such as lower rates during a set off-peak period; or
	Toll rates could be set to change dynamically, based on level of congestion
	Excess revenue received from congestion pricing could be used to fund freight-related or other types of improvements
Container / Lift Fees	 Fees assessed on container movements at marine ports, airports, freight terminals, or specific freight carrying facilities
	Fees assessed at intermodal facilities for lift movements
	 Revenues could be used to fund either specific freight- related projects or go into a more general freight- infrastructure fund
Public-Private Partnerships (PPPs)	Enables private sector involvement in the financing and delivery of transportation projects
	 Enables alternative delivery methods, resulting in an expedited project development process
	 Could involve shared costs of infrastructure improvements by private and public sectors, when both sectors would benefit from the improvement
	Legislative action would be required in Illinois to enable the use of public-private partnerships
Special Taxing	Property taxes either on a permanent basis as a continuous revenue source for freight-related improvements, or on a temporary basis to fund specific improvements
	Dedicated sales tax To the sales tax
	Tax-Increment Financing (TIF)

Table 6.6 Special Financing Programs

Special Financing Programs	Features
Transportation Infrastructure Finance and Innovation Act (TIFIA)	Provides federal credit assistance through secured loans, loan guarantees, or lines of credit for regionally or nationally significant transportation projects
	Eligibility was expanded by SAFETEA-LU to qualifying private rail projects
	Loan repayment must come from tolls, user fees, or other dedicated revenue source
Rail Rehabilitation and Improvement Financing (RRIF)	Provides Federal loans and credit assistance for rail and intermodal projects
	Both private and public sector project sponsors are eligible
State Infrastructure Banks (SIB)	Enables the establishment of revolving loan programs by states, capitalized with Federal transportation funds, for transportation projects
	State matching funds required for capitalizing the SIB
	Loans may be issued to both public and private sector project sponsors
Private Activity Bonds (PAB)	Allows states and local governments to issue tax-exempt bonds for private sector sponsored transportation projects Promotes private investment in transportation infrastructure
Grant Anticipation Revenue Vehicle (GARVEE) Bonds	Enables states to issue debt based on anticipated future Federal-aid highway revenues
	Only approved Federal-aid debt-financed projects are eligible

Implement the CREATE Program.

The Chicago Region Environmental and Transportation Efficiency Program (CREATE) is a public-private partnership between the US DOT, the State of Illinois, the City of Chicago, Amtrak, Metra, and the nation's freight railroads, charged with identifying and implementing infrastructure improvements that will enhance the efficiency of the rail network in the Chicago region, while at the same time improving the quality-of-life for the area's residents. The CREATE Program includes 71 projects on five rail corridors, including roadway grade separations; railroad grade separations; viaduct improvements; safety enhancements at grade crossings; and track, switching and signal system upgrades. While a portion of the required funding has been allocated for the 71 CREATE projects, over \$2.5 billion in additional funding still needs to be secured.

Priority: High

• Timeframe: Short-term

Implementing Agencies: CREATE partners

Action Items:

- Identify funding sources for continuing implementation of the CREATE Program infrastructure improvements.

Regional Framework Theme: Environmental and Community Impacts

Policy Recommendation #19

Promote lower-emission freight modes and technologies (e.g. GenSet locomotives).

In consideration of the region's overall goal of enhancing the environment and improving the quality of life, this policy recommendation focuses on reducing freight-related emissions, thus resulting in improvements to air quality, and increased sustainability, through greater fuel efficiency. This could be accomplished by promoting the most energy efficient and lowest-emission freight modes, as well as encouraging technologies that help achieve these goals. A recent technology that has been developed to provide greater fuel efficiency and lower emissions for the railroad mode is the GenSet locomotive. This new technology is based on the use of two or three smaller engines per locomotive, instead of the traditional single-engine locomotives. According to the National Railway Equipment Company, GenSet locomotives are more efficient than the single-engine locomotives, while reducing noise by more than 85%, reducing NOx and PM emissions by 85%-90% and resulting in fuel savings of 35%-70%.⁵

Priority: High

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Timeframe: Short-term

- Implementing Agencies: USEPA, US Ports and Maritime Administration, Metra, private railroads
- Action Items:
 - Encourage the use of more energy-efficient and lower-emission locomotives by Metra and the private railroads.
 - Where practical and economically viable, provide incentives to encourage diversion to lower-emission non-highway freight modes.

⁵ http://www.nationalrailway.com/nviro.asp

Identify and implement design features to control freight-related noise.

A major community impact associated with existing and potential increases in freight movements within the Chicago region is the increase in freight-related noise. For the rail mode, in addition to the actual noise and vibration that results from the actual movement of the train down the tracks, there is also a significant amount of noise associated with the sounding of the train horn as a warning measure as the train is approaching an at-grade crossing. Recent Federal guidelines have enabled the establishment of Railroad Quiet Zones where train horns are allowed to be silenced in exchange for implementing Supplemental Safety Measures at the crossings to compensate for not sounding the horn, without decreasing overall safety.

Truck related noise has also been identified as a concern by some communities, including the potential noise associated with nighttime deliveries (which are banned in many communities due to the noise issue), as well as the noise generated by heavy volumes of trucks on many of the region's Interstate Highways and major arterials. Potential noise mitigation measures for these types of noise would include the construction of noise walls or in some instances berms to serve as buffers between the highways (or other freight-related facilities) and the residential communities through which they pass.

In addition to the freight-related noise associated with truck and rail modes, there is also an impact on communities surrounding the region's airports (particularly O'Hare). Over and above the daytime noise which results primarily from passenger flights, since most air cargo flights occur during the nighttime hours, there is an additional impact to surrounding communities during these hours.

• Priority: High

Timeframe: Mid to Long-term

Implementing Agencies: Individual communities, IDOT, PPPs

Action Items:

- Work with developers in identifying potential noise mitigation measures surrounding freight facilities and associated funding sources for implementing these measures.
- Assist communities by developing a model noise mitigation ordinance for freight-related developments.
- Promote use of quieter technology locomotives by Metra and private railroads (see Policy Recommendation #19).
- Assist communities in performing railroad quiet zone studies, and in identifying funding sources for implementing Supplemental Safety Measures at grade crossings to enable the establishment of quiet zones.

 Identify funding sources and Federal programs for airport noise mitigation (such as noise insulation of public buildings, for which \$5M was approved in Chicago through ARRA funding.)

Policy Recommendation #21

Develop process for identifying development opportunities, brownfield re-use.

In order to market the region's freight assets, a database should be developed to identify potentially developable sites, in particular the re-use of brownfield redevelopment locations. This recommendation is consistent with an integrated approach to the development of freight-related activities and land use planning. In addition, the redevelopment of brownfield sites with industrial uses will encourage freight-dependent developments in areas that are able to support them from an infrastructure perspective. At the same time, many of the potential brownfield redevelopment sites are located within the region's urban center, which would likely result in reduced drayage costs, addressing a concern raised by stakeholders who favored development within the urban core, as opposed to fringe developments for freight-dependent industries.

Priority: Medium

• Timeframe: Short-term

• Implementing Agencies: CMAP, IDOT, IEPA, DCEO, local governments

Action Items:

- Develop database and GIS mapping of brownfield redevelopment sites, highlighting transportation assets and proximity to related industrial developments. Use this database to market potential developers of industrial properties who are interested in locating within the Chicago region.
- Promote infrastructure improvements to brownfield sites to enhance their desirability.
- Encourage tax increment financing for brownfield site redevelopment.

Policy Recommendation #22

Support City of Chicago industrial corridor designations of Planned Manufacturing Districts.

The City of Chicago currently has a total of 15 Planned Manufacturing Districts within its 24 designated industrial corridors. The purpose of these Planned Manufacturing Districts is to preserve land for industrial development and related land uses within the City through special zoning designations, to promote industrial development and prevent the designated areas from being

used for other purposes. These areas then become marketable to potential manufacturing companies looking to locate within the area.

• Priority: Medium

Timeframe: Short-term

• Implementing Agencies: CMAP, local governments

Action Items:

- Assist in marketing the City of Chicago's Planned Manufacturing Districts in order to attract and retain manufacturing industries within the City.
- Identify potential areas outside the City of Chicago for establishing similar Planned Manufacturing Districts.

Policy Recommendation #23

Promote safety programs such as "Operation Lifesaver" and "No Zone".

"Operation Lifesaver" is an international program focused on increasing awareness of the potential dangers associated with highway-railroad grade crossings as well as other safety issues within railroad right-of-way. The non-profit organization, Operation Lifesaver, Inc. (OLI), oversees the program, with the cooperation of numerous public and private sector stakeholders, including the railroads, highway safety organizations, and government agencies at the Federal, state and local levels. Each of the 50 states and the District of Columbia has a statewide program, including a state coordinator to oversee and promote the state's training and other outreach activities.

"No-Zone" is a highway focused safety program, established in 1994 by the Federal Motor Carrier Safety Administration (FMCSA), to educate motorists on how to safely share the road with trucks and buses (commercial motor vehicles, or CMVs). The term "no-zone" actually refers to the blind spots around trucks and buses, or areas around the vehicles in which the commercial vehicle driver loses sight of passing or approaching vehicles. The "No-Zone" program promotes educational activities to create driver awareness of the dangers of driving in a commercial vehicle's "No-Zone", in an effort to reduce the number of crashes that occur in this area. The activities associated with the "No-Zone" program have been sponsored by the combined efforts of public and private stakeholders, similar to Operation Lifesaver.

• Priority: Medium

Timeframe: Short-term

- Implementing Agencies: Metra, private railroads, trucking industry, general public, CMAP, any entity willing to fund
- Action Items:

- Take advantage of the educational resource materials that are provided by "Operation Lifesaver" and "No-Zone" programs, in developing enhanced regional outreach programs. This could be done through working with the Illinois Statewide Coordinator for Operation Lifesaver and the FMCSA.
- Develop a Speakers' Bureau, providing pre-prepared age appropriate presentation materials for volunteer trainers to provide training programs at schools, driver education programs, etc.
- Take advantage of appropriate local fairs, and other venues to sponsor "safety booths" for distributing promotional materials.

Address the higher wear and tear on freight-impacted road surfaces with increased maintenance efforts.

With the clustering of freight-dependent industries in certain subareas of the Chicago region, the roadways which provide access to these areas carry significant volumes of heavy trucks resulting in substantial wear and tear on these roadways. Stakeholders have identified this as a concern which crosses municipal boundaries, as the roadways that are experiencing the most significant impacts often pass through multiple jurisdictions. The focus of this policy recommendation is to foster multi-jurisdictional and private sector cooperation in identifying the freight-impacted roadways and developing a process for addressing the required increased maintenance. An example of such a process is one which is currently being used by the Delaware Valley Regional Planning Commission (DVRPC), known as the Freight Forward Improvement Program.⁶ Through this program, the region's freight stakeholders are able to identify and submit for consideration small-scale "quick fix" types of projects that facilitate freight movements. Because this program involves both public and private sector stakeholders, it fosters cooperation and trust between these two sectors.

• Priority: Medium

• Timeframe: Mid-term

• Implementing Agencies: IDOT, counties, local governments, townships

- Action Items:
 - Develop a process for identifying needed freight-related improvement projects, similar to the DVRPC Freight Forward Improvement Program.

⁶ http://www.dvrpc.org/Freight/FreightForward.htm

- Identify candidate freight-impacted roadways for special consideration of enhanced design standards for heavy truck volumes. Include evaluation criteria that will enable these types of improvements to receive "points" based on the freight-related benefits that will result from their implementation.
- Identify non-traditional funding sources, such as public-private partnerships for funding the increased maintenance needs on freightimpacted roadways.

Improve both rail and truck access into intermodal facilities to reduce community impacts.

As brought out during the stakeholder interviews, the development of intermodal facilities has impacts that reach beyond the borders of the actual facility and even the municipalities in which they are located. Of particular concern to the surrounding municipalities is the impact on roadways which provide access to the facility. In some cases, these impacts are a result of the wear and tear on the roadways due to heavy truck traffic, or delays to passenger vehicles due to the high percentage of trucks. In other instances, the impacts result from blocked highway-rail at-grade crossings which may be blocked when trains are awaiting clearance into the facility. In addition to causing delay to passenger vehicles at these blocked crossings, this can also become a safety concern when emergency vehicles are delayed at the crossing. The focus of this policy recommendation is to encourage coordinated planning in the development and expansion of intermodal facilities in the Chicago region in order to minimize these types of community impacts.

• Priority: High

• Timeframe: Short-term

• Implementing Agencies: IDOT, counties, local governments, townships

Action Items:

- Restructure existing yards and/or intermodal facilities to allow easier movement of trains onto and off of the mainline by lengthening receiving and departure tracks or increasing the number of such tracks.
- Promote multi-jurisdictional coordination and cooperation in the planning process for intermodal facility development, including not only the facility design itself, but also the impacts on surrounding communities that may result from the freight hauling vehicles that are accessing the facility.

 Identify opportunities for non-traditional funding (such as public-private partnerships) for improvements to roadways providing access to intermodal facilities.

Policy Recommendation #26

Accommodate freight in ways conducive to intermodal passenger transportation, such as pedestrian, bicycle, passenger vehicle, commuter rail, and inter-city passenger rail, including crossings and shared-use corridors.

As the demand for capacity continues to increase for all modes of passenger travel and goods movement, it will become increasingly important to ensure compatibility between freight and passenger modes, as well as ensuring linkages between the modes. From a freight mobility perspective, this means continuing to support efficient intermodal operations. On the rail side, this includes the most efficient shared use of rail corridors by commuter trains, intercity passenger trains, and freight trains, in addition to ensuring that at-grade crossings are functioning safely and efficiently for the movement of trains, cars, pedestrians and bicyclists. From a land use perspective, it translates into coordinating land use and transportation plans, including the movement of both people and goods by all modes through multi-jurisdictional planning efforts.

- Priority: High
- Timeframe: Short to Mid-term
- Implementing Agencies: CMAP, IDOT, Metra, Amtrak, local governments
- Action Items:
 - Support the City of Chicago's Complete Streets Program and encourage similar programs in other parts of the region.
 - Support the CREATE Program (see Policy Recommendation #18) which promotes cooperation between freight and passenger railroads in shareduse corridors.
 - Identify opportunities for shared-use in corridors being considered for infrastructure capacity expansion projects.